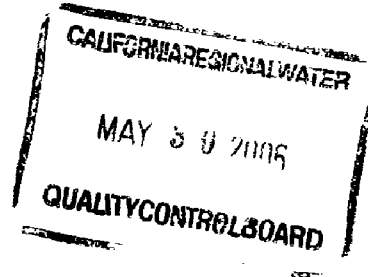




UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

75 Hawthorne Street  
San Francisco, CA 94105-3901



Mr. Bruce Wolfe  
Executive Officer  
California Regional Water Quality Control Board  
San Francisco Bay Region  
1515 Clay Street, Suite 1400  
Oakland, CA 94612

Dear Mr. Wolfe:

Thank you for the opportunity to review the proposed Basin Plan Amendment and Staff Report for the Revised TMDL and Proposed Water Quality Objectives for Mercury in San Francisco Bay dated April 21, 2006. We appreciate the hard work to develop these proposals and reiterate our commitment to help you complete this important work.


We fully support the proposal to rescind the numeric Basin Plan objective for mercury in San Francisco Bay and replace it with fish-tissue based objectives. We support your use of the fish consumption information contained in the Technical Report, San Francisco Bay Seafood Consumption Study (SFEI, 2000) to determine human health objectives and compliance requirements. The human health and wildlife objectives, and respective compliance determinations, are appropriate and clearly defined.

We support the proposed revision to individual waste load allocations for NPDES dischargers. We also support the application of compliance triggers and the requirement to monitor methylmercury in effluent.

Our comments in this letter do not constitute an approval, disapproval or determination by EPA under Clean Water Act section 303(c) or 303(d). We will act upon any water quality standards and TMDL submittal following formal State adoption and submittal to EPA.

We are pleased to see these proposed changes and believe they will enhance the Board's ability to protect human health and wildlife in the Bay from the adverse effects of mercury. If you have any questions concerning these comments, please call me at (415) 972-3572 or refer staff to Diane Fleck at (415) 972-3480.

Sincerely yours,

  
Alexis Strauss  
Director, Water Division  
24 May 2006

**From:** <Fleck.Diane@epamail.epa.gov>  
**To:** <CAustin@waterboards.ca.gov>, <DWhyte@waterboards.ca.gov>, <TMumley@waterboards.ca.gov>  
**Date:** 6/5/2006 9:24:43 AM  
**Subject:** Additional Minor Comments on SF Bay Hg TMDL/WQS

Hi Carrie, Dyan & Tom

Below are a couple of specific comments that we have on the Draft Staff Report and Draft Basin Plan Amendments for Mercury in San Francisco Bay. We are sending you this informal note, which is in addition to the formal letter of support from Alexis. Most of these comments are editorial or otherwise minor.

1. The Draft Staff Report at page III-10 says that the Board will be seeking approval of the 20 year implementation schedule under 40 CFR part 131.13 for the wastewater allocations. The report does not mention this for stormwater allocations, which will also require a schedule (pages 15 & 25 of the draft BPA). We suggest you add "and stormwater" to the statement in the Staff Report. In your letter to EPA seeking approval of a schedule for wastewater allocations, please also include a request for approval of a schedule for stormwater allocations.
2. In your request to EPA for approval of the implementation schedules under 40 CFR part 131.13, you will need to include documentation or an explanation of how these implementation schedules are consistent with 40 CFR part 122.47. Part 122.47 requires compliance with water quality standards as soon as possible.
3. Water Quality Standards Applicable to San Francisco Bay: On page II-3 of the Staff Report, Table 2-1, the explanation of the horizontal lines says that both the Basin Plan objectives and the CTR criteria apply in "other marine waters". Our understanding is that the Basin Plan objectives are not (and never were) applicable to South San Francisco Bay below Dumbarton Bridge. If so, we suggest you add "except for South Bay below Dumbarton Bridge" to this explanation (and remove it from the list following the "e.g.,").
4. Water Quality Standards Applicable to San Francisco Bay: On page II-13 of the Staff Report, Table 2-4, the second category with the diagonal lines in both directions (the cross-hatched lines) indicate that the objective will be 0.051 ug/l. It is our understanding that the objectives will be 0.051 ug/l and the new fish tissue objectives. If so, we suggest adding the fish tissue objectives to the explanation. This would be consistent with the legend of the figure on the following page.

If you have any questions on the first two comments, please do not hesitate to call Nancy Yoshikawa at 415 972-3535; if you have any questions on the second two comments, please do not hesitate to call me at 415 972-3480.

Thanks,  
Diane

Diane E. Fleck, P.E., Esq.

U.S. EPA Region 9 WTR-2  
75 Hawthorne Street  
San Francisco, CA 94105  
Phone: 415 972-3480  
Fax: 415 947-3537

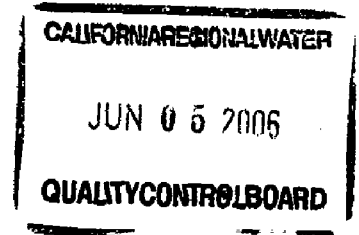
**CC:** <Yoshikawa.Nancy@epamail.epa.gov>, <Eberhardt.Doug@epamail.epa.gov>,  
<Smith.DavidW@epamail.epa.gov>, <Leith.Suzette@epamail.epa.gov>



June 5, 2006

Transmitted via electronic mail: [caustin@waterboards.ca.gov](mailto:caustin@waterboards.ca.gov)

Carrie Austin  
SF Bay Regional Water Quality Control Board  
1515 Clay Street, Suite 1400  
Oakland, CA 94612



**RE: Comments on April 21, 2006 Amendments to the SF Bay Mercury TMDL**

Dear Ms. Austin:

On behalf of Baykeeper, Clean Water Action, and NRDC, we thank you for this opportunity to provide input on the proposed amendments to the San Francisco Bay mercury TMDL ("TMDL," "Basin Plan Amendment," or "BPA"). We appreciate all the hard work that that Staff has put into these revisions in response to the State Board Resolution No. 2005-0060. Our overall goal is to ensure that there is a strong plan for mercury cleanup in place that reduces current sources as much as possible while aggressively addressing existing pollution and legacy hot spots. Thanks to the State Board's remand order and Regional Board Staff's work, we believe we are on the way to achieving this goal.

### **1. Amendments We Support**

We appreciate that Staff's proposal already makes a number of helpful proposed changes. These include:

- Requiring all dischargers to monitor for and report levels of methyl mercury in discharges;
- Reducing wastewater allocations;
- Tightening language on pollution prevention studies including a schedule of actions and effectiveness measures to be included in wastewater permits;
- Tightening language on demonstration of good performance for all industrial wastewater dischargers;
- Strengthening risk reduction language to include every discharger and including the specific risk reduction language from the remand; and

- Referencing the SF Bay Long-Term Management Strategy's restriction for dredged spoils.

## **2. Additional Revisions are Necessary**

Despite the above-mentioned amendments that we support, we believe there are some instances where the proposal does not a) fully address the changes required by the State Board remand order, b) comply with the Clean Water Act, or c) further the policy goals that this Regional Board has advocated in the recent past. These concerns are described below. Where possible, we have tried to suggest a solution to address the concern so that Staff may be able to incorporate these changes easily.

- 1) Group allocations for municipal and industrial wastewater dischargers should be eliminated, and individual wasteload allocations should be enforceable

### **Concern**

While the current TMDL includes wasteload numbers associated with individual wastewater discharges, the Staff report makes clear that these individual wasteload numbers are intended generally to be unenforceable. The report states that the Regional Board intends "to pursue enforcement action against dischargers that exceed their individual mass limit **only** if the aggregate mass limit is exceeded." Staff Report, page III-10 (emphasis added). Thus if a discharger, like C&H Sugar or Chevron, exceeds their limit for mercury the proposal would require only that the discharger prepare a report concerning the exceedance, BPA, page 19 ; enforcement actions could be taken against individual dischargers only if the entire category of dischargers violated its group limit.

This scheme is akin to not ticketing someone for speeding because everyone else is driving below the speed limit. It would effectively create a Basin-wide "bubble" under which one discharger can pollute more if another does not meet its limit. This scheme violates both the plain direction of the State Board's remand order and the clear requirements of the Clean Water Act. It also is poor policy that would set extraordinarily bad precedent for other TMDLs.

The group wasteload approach is bad policy in part because it would allow for higher net mercury discharges and the potential for localized hotspots immune from enforcement action. Because individual dischargers would generally face no sanction for sometimes violating their individual wasteload allocation, they would be able to discharge higher average levels of mercury. Significant individual exceedances could also create hotspots potentially immune from enforcement, simply because less mercury was being discharged by another entity on the far side of the Bay. The staff report does not analyze or address either of these impacts.

The precedent set by this approach would also be extremely dangerous. Will it be generalized to other contexts? How would the Board draw the line?

In Resolved 3, the State Board rejected the use of group wasteload allocations as the mechanism for implementing this TMDL. Specifically, the State Board "direct[ed]" that the TMDL be revised "to establish individual wasteload allocations." The proposal presently before the Board attempts to bypass the State Board's clear direction by making individual wasteload allocations unenforceable. We respectfully submit that if the State Board had intended individual allocations to be unenforceable, it would not have required them.

As you know, the Clean Water Act generally requires individual permit limits. *See, e.g.*, 33 U.S.C. § 1311(e) (requiring that effluent limitations "shall be applied to all point sources of discharge of pollutants"). Here, the State Board went the additional step of requiring individual waste load allocations. *See supra*. Although section 303(d) of the Clean Water act allows revisions of individual effluent limits, those revisions must be based on wasteload allocations, *see, e.g.*, 33 U.S.C. § 1313(d)(4)(A), which here the State Board has required to be individual. And the Clean Water Act makes those individual effluent limits enforceable. *See, e.g.*, 33 U.S.C. § 1319(a)(1). The present proposal to make individual wasteload allocations unenforceable is thus not only bad policy, it is contrary to the direction of the State Board and would violate the law.

But put simply, if Tesoro violates its mercury limit (derived from the TMDL), the Regional Board cannot simply ignore this violation. As the agency responsible for implementing the Clean Water Act, the Water Board has a duty to bring enforcement action – not just impose a reporting requirement – against individual polluters, regardless of the actions of other polluters in the category.

#### **Necessary Revision**

Individual limits must be made enforceable. Staff should remove all references to aggregate allocations and should remove the following two sentences from pages 18 and 19 of the BPA in the municipal and industrial wastewater sections:

DELETE: "If any aggregate mass limit is exceeded, the Water Board will pursue enforcement action against those individual dischargers whose mass discharges exceed their individual mass limits."

And replace this sentence with:

REPLACE WITH: "If any limit is exceeded, the Water Board will pursue enforcement action against those individual dischargers whose discharges exceed their individual limits."

Language should also be removed from both the municipal and industrial wastewater sections of the TMDL that states that if an individual allocation is violated, but the group allocation is met, only a report will be required. Water Board enforcement under the CWA means penalties for violations, as well as requirements to complete reporting requirements and implementation activities when they violate their individual limits – regardless of whether other dischargers are meeting or exceeding their limits.

2) Refineries should be required to provide more information on crude oil mercury

**Concern**

We have two specific concerns regarding the refinery requirements.

First, there are two fundamental questions that every discharger must answer – 1) what amount of pollutant is in your influent, and 2) where is it going. The TMDL and the only 13267 letter that has been issued to date require the refineries to answer just a part of this second question – how much mercury is coming out through air emissions. The TMDL still fails to require refineries to determine how much mercury they bring into the Bay Area every year in crude oil. According to Regional Board Staff estimates, this number is approximately 380 kg – an amount roughly equivalent to the mercury entering the Bay every year from the legacy of abandoned mines in the Central Valley. This estimate, however, cannot be confirmed without information from the refineries themselves.

Through Finding 8, the State Board has stated its support for requiring refineries “to investigate the environmental fate of mercury in crude oil,” including the potential pathways by which crude oil mercury could be discharged.” These questions cannot be answered without reliable information on the amount of mercury being brought into the Bay Area in crude oil. Without knowing what is coming in, the Regional Board has no assurance it knows what is going out and whether all pathways have been adequately taken into account.

It is as if someone were being asked to balance a checkbook without knowing the total opening balance (the amount of mercury in crude oil). As a matter of sound policy and science, the Regional Board should require this basic information. A TMDL assumes the total load is known; without that, the mass-balance analysis on which the TMDL relies cannot be completed. By not requiring the information from refineries, the Board is essentially letting them off the hook, and perhaps leaving a large quantity of mercury unaccounted for. Answering this question should not pose a particular regulatory burden on the oil industry, which has recently demonstrated a remarkable capacity to survive in an era of high oil prices.

And second, the Basin Plan currently requires the refineries to provide information on pathways by which mercury can lead to the “Bay.” There is no reason, however, to be so geographically constrained – if we are considering pathways such as air deposition, auto

exhaust, or refinery flare ups, then the Water Board should also be concerned about refinery mercury leading to other smaller tributaries to the Bay as well as refinery mercury leading to storm drains.

### **Necessary Revisions**

To address the need for accurate information, we simply suggest that Staff add one more question to the list of questions the refineries must answer on page 20 of the BPA.

ADD: "How much mercury do the individual refineries bring into the Bay Area every year in crude oil?"

And second, to ensure that the TMDL captures all pathways of mercury from the refineries into the Bay, we suggest that Staff broaden the term "Bay" to include all potential waterbodies to which refinery mercury could be deposited and then flow into the Bay. This will allow the Regional Board to set viable limits on refinery discharges and identify potential hotspots. This sentence on page 20 of the BPA would read:

REPLACE WITH: "What are the potential pathways by which crude oil mercury could be discharged to the Bay Area watershed from Bay Area petroleum refining facilities?"

- 3) Stormwater shield should be removed – dischargers cannot be "deemed in compliance" with water quality standards if water quality standards have not actually been achieved

### **Concern**

This "deemed in compliance" language once again provides a shield to stormwater dischargers. Rather than requiring dischargers to achieve water quality standards through best management practices and an iterative process, this language allows dischargers to be off the hook even though water quality standards are not met.

During the hearing over the Bay Area Urban Creeks Pesticides TMDL, Baykeeper challenged this same shield language. It was discovered during the hearing that Staff did not intend for this language to provide a shield. In fact, Staff acknowledged that the sentence did not actually serve any purpose. Therefore, the Board voted to remove the language. It would be bad policy for the Board to have found no reason for the language in the Pesticides TMDL but then to adopt that language in this TMDL.

### **Necessary Revision**

We request that Staff remove this sentence on page 16 of the BPA completely, as was done in the Bay Area Urban Creeks Pesticides TMDL.



DELETE: "An urban runoff management agency that complies with these permit requirements shall be deemed to be in compliance with receiving water limitations relative to mercury."

- 4) The BPA sections on mines and toxic Bay sediment should be amended to respond to the Remand Order

### **Concern**

We are concerned that the TMDL does not adequately address the State Board order Resolved 7 to complete a mines and sediment inventory and prioritization. We agree with the State Board that a legacy mercury inventory should be done thoroughly. This means taking into account more than just mines by also looking at streambeds and other mercury rich sediment spots that drain into the Bay. We believe Staff is currently pursuing activities to meet the State Board's requirements, but these actions have not been codified in the Basin Plan Amendment.

Chapter Four of the Basin Plan is where the Water Board describes the actions necessary to achieve water quality standards. Omission of specific actions that the Water Board will take would weaken the Board's ability to implement the TMDL and would undermine the intent of the State Board's resolution. The lack of detailed actions would also stand in stark contrast to other sections of Basin Plan Chapter Four, in which previous and future steps toward managing various water-quality problems and attaining water-quality standards are clearly spelled out. By not including the mine and hotspot actions in the Basin Plan, it would seem as if this mercury cleanup activity had been singled out for a lower level of importance and commitment to implementation. Additionally, by not mentioning the activities directly in the BPA, it is difficult for the public to know what the Regional Board Staff is doing to meet these requirements, and it may become difficult for future Staff members not currently involved in the development of this TMDL to know what has been or should be done.

### **Necessary Revisions**

We suggest adding language about the specific activities Staff is taking or intends to take to address the remand order and the time schedule for that action. We envision this change to take the form of a few sentences, which could be added to page 22 of the BPA in the mines and Bay margin sections, OR the language could be added to page 24 of the BPA in the adaptive implementation section of what Water Board Staff intends to do. These three sentences should address the following:

We recommend that Staff add specific language codifying their current efforts to investigate sites and take water quality and sediment samples, thereby creating a comprehensive inventory by which to prioritize clean up based on potential for pollution reduction, estimates of costs, and/or the amount of effort required.

We encourage Staff to include language stating they will estimate what it will take to clean up specific sites and identify potential funding sources for clean up including potential responsible parties, EPA Superfund, and/or funds available through the State, the State Board or other state agencies, including the Department of Conservation.

Finally, we believe there should be specific language and periodic deadlines for updates as to how the Board plans to work with Region 5 on the mines and hot spots in the rest of the watershed – including any cooperative funding initiatives.

5) Offsets language as currently written provides an out to wastewater dischargers

**Concern**

There are two concerns regarding the offsets language. First, offsets should not enable the Regional Board and dischargers to avoid doing everything possible to reduce or eradicate mercury from all sources. We would therefore urge the Regional Board Staff not to provide an “out” for dischargers until “municipal and industrial point source dischargers [] incorporate the most effective treatment methods and pollution prevention practices practicable for their discharges.” Resolution No. 2005-0060, Finding 7(a). Staff’s goal should be to get all of our discharges to the maximum reasonable and feasible level of treatment and pollution prevention and then see what else can be done to reduce Bay-wide mercury loads. We support Staff’s focus on this goal and encourage you to simply reference the yet-to-be-created off-site policy as a re-opener clause in permits.

Secondly, as mentioned many times throughout this process, we oppose a “pollutant trading” policy that allows the creation of bioaccumulative toxic hotspots through a potentially meaningless program of paper trading and fuzzy math that is neither transparent nor publicly accountable nor addresses environmental justice concerns of disparate impacts. Offsets policies run into such accountability problems when determining artificial ratios and measuring actual pollution reductions. The terms “pollutant trading” and “offsets” have historically been controversial, in part because they have often been used in a manner that could shift health and environmental burdens on to impoverished communities and communities of color.

This is a very difficult issue that remains under policy discussion. We recognize, however, that the particular circumstances of mercury pollution to the San Francisco Bay are unique. This situation involves large mercury loads for which there may be no presently viable responsible party. In this narrow context, we would support continued discussion of a limited program under which current dischargers who have taken all appropriate steps to control their own discharges, but are still violating receiving water quality standards due to a lack of assimilative capacity, would contribute significant resources to cleaning up otherwise uncontrolled legacy sources. We cannot imagine any

circumstances under which such an approach would be acceptable, however, if it imposed disproportionate pollution impacts on particular, vulnerable communities, or if localized mercury concentrations put or continue to put any community at risk.

### **Necessary Revisions**

We ask Staff to remove the reliance on pollutant offsets including the sentence on page 25 of the BPA that the Water Board will consider modifying allocations and schedule if no offset program adopted within twenty years. This amended language is unnecessary because the Remand Order only asks for the re-opener clause currently on page 26 of the BPA. Staff should delete the following sentence on page 25 of the BPA:

DELETE: "Approximately 10 years after the effective date of the TMDL or any time thereafter, the Water Board will consider modifying the schedule for achievement of the wasteload allocations or revisions to wasteload allocations if the State Board has not established a pollutant offset program that can be implemented within the 20 years required to achieve final wasteload allocations."

This sentence effectively eliminates any incentive for dischargers to help create a meaningful off-site credits policy because the Board would be committed to raising the allocations if a policy is not created. In addition, this language creates a perverse incentive to avoid further upgrades to source control and treatment technologies because dischargers can now rely on getting either an offset policy or receiving an increase in allowable loads.

Also, in an effort to be very clear about what the environmental community could or could not accept, we would urge Staff to consider renaming this policy the "off-site credits" policy.

- 6) The TMDL does not adequately seek information on air sources, which could be contributing to stormwater agencies' loads

### **Concern**

Based on Resolved 15 of the Remand Order and the atmospheric deposition language currently in the BPA on page 21, we do not believe the TMDL adequately addresses air sources. While the State Water Board has committed to coordinating with the Air Board, we believe the Regional Board still has an important action it can take to help produce information on air sources in our region. We recommend that Staff require stormwater agencies to aggressively identify and regulate fixed sources within their watershed of airborne mercury-laden particles and dust which may enter runoff within their watershed. These requirements should be made a part of the industrial inspection programs for the new Phase I MS4 municipal regional permit.

### **Necessary Revision**

We believe this revision can be easily made by adding one more bullet to the urban runoff agencies section on page 15 of the BPA:

ADD: "Aggressively identify and regulate through permits and the TMDL fixed sources within their watershed of airborne mercury-laden particles and dust which may enter runoff."

#### **7) Adaptive Implementation section should be clarified**

### **Concern**

In order for the Basin Plan and mercury TMDL to reflect updated information regarding current uncertainties and to fully implement the iterative design envisioned by Staff for this TMDL, we believe a true commitment to consider reevaluation and make substantive changes every 5 years is necessary. But we are concerned that Board staff does not have the capacity to adequately implement the adaptive management steps described in the BPA and there is no agreement or structure by which the dischargers would provide assistance.

### **Necessary Revision**

We recommend that the Regional Board Staff clarify the adaptive implementation language by adding a phrase which would commit the Board to reevaluating the TMDL and revising it as necessary in a public forum every 5 years, and providing justification for why specific changes are or are not being made. A bullet point should also be added to each section (each of the individual sections describing requirements for industrial wastewater, municipal wastewater, and municipal stormwater dischargers) requiring participation in the adaptive management process described on page 24.

ADD: "Participate in and assist in review and continuous improvement of TMDL implementation to achieve more strategic, efficient, and cost effective achievement of water quality standards. "

#### **8) Risk reduction language should be incorporated for each discharger**

### **Concern**

The bullet points describing risk reduction activities for each discharger do not reflect the language in the State Board resolution, so that the dischargers are currently not necessarily required to participate in the full range of activities the Water Board has assigned to itself on page 24.

### **Necessary Revision**

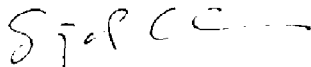
The risk reduction bullet points in each section for every discharger should read:

ADD: "Develop and implement effective programs to address public health impacts of mercury in San Francisco Bay/Delta fish, including activities that reduce actual and potential exposure of and mitigate health impacts to those people and communities most likely to be affected by mercury in San Francisco Bay caught fish, such as subsistence fishers and their families."

### **3. Conclusion**

We appreciate the Board and Staff's time and consideration of our concerns and the proposed suggestions. We believe we are very close to a strong mercury cleanup plan for the Bay, and we would be pleased to support a revised TMDL if it incorporated the main revisions we have requested herein. We look forward to working with Staff to improve this TMDL and Basin Plan Amendment so that the Bay Area's environmental, public health, and environmental justice communities can support your efforts.

Sincerely,



Sejal Choksi  
San Francisco Baykeeper

Andria Ventura  
Clean Water Action

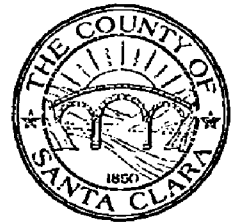
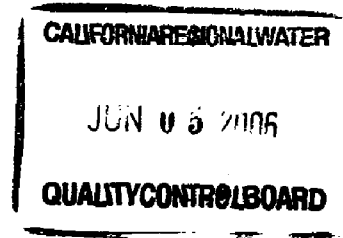
Michael Wall  
Natural Resources Defense Council

cc: Bruce Wolfe, Executive Officer SF Bay Regional Water Quality Control Board  
Members, SF Bay Regional Water Quality Control Board  
Members, State Water Resources Control Board  
David Beckman, Esq, NRDC

# County of Santa Clara

Parks and Recreation Department

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Reservations (408) 355-2201  
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June 5, 2006

Sent by Fax and U.S. Mail

Ms. Carrie Austin  
San Francisco Bay Regional Water Quality Control Board  
1515 Clay Street, Suite 1400  
Oakland, CA 94612  
Fax: (510) 622-2460

Subject: Response to Amendment to the Water Quality Control Plan for the San Francisco Bay Basin Related to Mercury in the San Francisco Bay

Dear Ms. Austin:

The County of Santa Clara, Parks and Recreation Department, offers the following comments on the revised Total Maximum Daily Load (TMDL) proposal for the subject amendment, dated April 21, 2006.

In June 2004, the County provided comments on the initial draft of the TMDL, emphasizing the considerable uncertainty associated with the scientific methodology proposed for addressing mercury impacts in the San Francisco Bay. The overarching concern – one shared by many commenters – was that the level of uncertainty could lead to a substantial expenditure of resources for a program that is still in its infancy from a scientific perspective, and lacks a clear demonstration of the necessary relationship between its approach and the objective of removal of harmful mercury from the watershed. After reviewing the data provided in the April 2006 report, we still have the same concerns, but for brevity's sake, we will not reiterate them point-by-point herein since you already have a record of our June 2004 response.

The County does have additional comment on a new element in the report, which is the proposed water quality objective for protection of aquatic species and wildlife. The proposed objective addresses fish tissue concentrations, not water quality directly, and is set at a level of 0.03 mg/kg for fish 3-5 cm in length. The basis for that target is an analysis by personnel at the U.S. Fish and Wildlife Service (FWS) carried out in 2003<sup>1</sup>. That analysis is not based on site-specific, or species-specific fieldwork, but rather on a series of assumptions applied to a limited amount of information largely derived from laboratory studies of a single avian species. Reliance on laboratory studies of a single species to address a bay-wide issue is questionable because, a) the results are not based on actual field research; and b) a single species does not account for the

<sup>1</sup> U.S. Fish and Wildlife Service (USFWS) 2003. *Evaluation of the Clean Water Act Section 304(a) Human Health Criterion for Methylmercury: Protectiveness for Threatened and Endangered Wildlife in California*, in the Staff Report as USFWS (2003).



tremendous variation in sensitivity and exposure among avian species around the Bay. The April 2006 report, at pages 10 and 11, also notes that the proposed human health standard of 0.2 mg/kg in fish tissue should itself protect most species of wildlife. And yet, this lower proposed standard to protect wildlife – in particular, to protect the least tern – has been presented with little scientific evidence to support the threshold argument.

The expected response to the above concern is that the 2003 FWS analysis represents the best available evidence, and that if the target adopted proves impractical or unnecessary, it can be adjusted during the subsequent decades of adaptive management. However, that perspective fails to take into account the difficulty of revising such targets once adopted, and the costs associated with attempting to meet such targets. Although the development of the mercury TMDL for the San Francisco Bay has progressed gradually, its success will be measured by its effectiveness over decades of implementation, and not by the speed of the plan development.

It is important to note that scientific research continues in an attempt to answer the many unresolved questions posed regarding the initial research for the TMDL targets. Of particular interest is an on-going study conducted by group of FWS personnel from the same office that produced the analysis used in establishing the initial TMDL proposal.<sup>2</sup> This group has issued a status report on the study, which commenced in 2005 and will be completed next year. That status report discusses completed sampling and future research, currently underway by FWS, which could provide additional data useful in determining appropriate TMDL targets. The study plan does not answer all questions, but it is a step in the right direction because:

- The new study will include site-specific and species-specific data collected from areas around the Bay.
- The 2005 FWS report appears to employ a more “whole system” approach to studying the impacts to avian productivity and will take into account predation, which the report acknowledges as the major factor influencing productivity. This bigger picture approach could provide better guidance on the control strategies that would improve productivity.
- The 2005 FWS report also emphasizes that simply identifying elevated mercury levels does not establish that the mercury in the organism is the cause of productivity loss. Other co-located contaminants could be the issue.

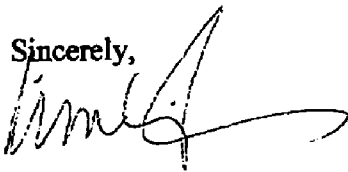
Because analyses of these data could be important to the successful implementation of the San Francisco Bay mercury TMDL, the County respectfully requests that the Regional Board delay adoption of a fish tissue based water quality standard for protection of aquatic species and bird life until the completion of the studies outlined in the 2005 FWS report.

<sup>2</sup> Schwarzbach, S.E., Suchanek, T.H., Heinz, G.H., Ackerman, J.T., Eagles-Smith, C.A., Adelsbach, T.L., Takekawa, J.Y., Miles, A.K., Hoffman, D.J., Wainwright-De La Cruz, S.E., Spring, S.E., Ricca, M.A., and T. Maurer. 2005. Mercury in Birds of the San Francisco Bay-Delta: Trophic Pathways, Bioaccumulation and Ecotoxicological Risk to Avian Reproduction. Unpubl. Report to California Bay-Delta Authority, U.S. Fish and Wildlife Service, California Department of Fish and Game, U.S. Geological Survey (“2005 FWS Report”).

We support the overall mission of the San Francisco Bay TMDL and have been active in the removal process since well before the TMDL effort got underway. Much work has already been done and more will be completed in the near future, removing the great bulk of mercury contaminants in the park. In 1999, the County Parks and Recreation Department completed calcine removal at five different former hot spots in Almaden Quicksilver County Park. This work was done after 15 years of exhaustive study and coordination with the State to identify a removal action plan. The total cost of this clean-up work was over \$6 million. The County will soon be commencing additional calcine removal in the park as a result of a recent agreement with the federal and state governments. This work is estimated to cost the County an additional \$1 million and will remove the last significant areas of calcines from the park..

Our comments are offered in the spirit of cooperation with the Regional Board and with the objective of attaining a reasonable standard that will ultimately benefit wildlife and our food chain.

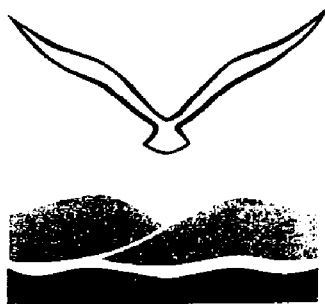
Sincerely,



Lisa Killough, Director  
Santa Clara County Parks and Recreation Department

c: Gerald F. George, Pillsbury Winthrop Shaw Pittman  
Katherine Harasz, Deputy County Counsel  
Jane Decker, Deputy County Executive





# Bay Area Clean Water Agencies

Leading the Way to Protect Our Bay

A Joint Powers Public Agency

P.O. Box 24055, MS 702

Oakland, California 94623

CALIFORNIA REGIONAL WATER

JUN 05 2006

QUALITY CONTROL BOARD

June 5, 2006

Mr. Bruce Wolfe, Executive Officer  
San Francisco Bay Regional Water Quality Control Board  
1515 Clay Street, Suite 1400  
Oakland, CA 94612

Via e-mail: [caustin@waterboard.ca.gov](mailto:caustin@waterboard.ca.gov)

RE: Amendment to the Water Quality Control Plan for the San Francisco  
Bay Basin Related to Mercury in the San Francisco Bay

Dear Mr. Wolfe:

The Bay Area Clean Water Agencies (BACWA) appreciate the opportunity to comment on the revised portions of the Mercury TMDL/Basin Plan Amendment (BPA). BACWA members own and operate publicly owned treatment works (POTWs) that discharge to San Francisco Bay and its tributaries. Collectively, BACWA's members serve over 5 million people in the nine-county Bay Area, treating domestic, commercial and a significant amount of industrial wastewater. BACWA was formed to develop a region-wide understanding of watershed protection and enhancement needs through reliance on sound technical, scientific, environmental and economic information and to ensure this understanding leads to long-term stewardship of the San Francisco Bay Estuary. BACWA member agencies are public agencies, governed by elected officials and managed by professionals who are dedicated to protecting our water environment and the public health.

This TMDL has been developed to address mercury present in the sediments of San Francisco Bay as a result of historic mining practices and other industrial activities involving legacy pollutants. The publicly owned clean water agencies' contribution of mercury to San Francisco Bay is approximately 1.4 % of the current mass loading. BACWA is very disheartened that so much effort and focus has been placed on this minor source of mercury and that many of the regulatory issues and focus in the remand

are directed toward public clean water agencies. Our members' record of compliance and adherence to permit requirements speaks for itself. BACWA member agencies are recognized as national leaders in the areas of pollution prevention, industrial pretreatment, wastewater operations and maintenance, and engineering practices. BACWA takes its stewardship role for San Francisco Bay seriously; this role is the life's work of our member agencies and their dedicated professional staff. BACWA members have worked hard and will continue to do so to protect the water quality and the beneficial uses of San Francisco Bay. BACWA will also continue to work with the San Francisco Water Board and its staff to ensure that future TMDLs will be focused on providing effective and efficient solutions for our San Francisco Bay.

BACWA believes that the revised TMDL is in general consistent with the State Board Resolution No. 2005-0060. We commend the Water Board for promptly making the suggested regulatory revisions in response to the State Board remand.

In the development of the Water Quality Objectives, we believe that the Water Board has gone beyond the requirements of the Resolution and adopted an unnecessary level of conservatism. The result is a much greater burden for San Francisco Bay than for any other water body in California and likely in the United States. While we all believe that San Francisco Bay and the uses it support are treasures, there should be more accompanying analysis consistent with CEQA and the Water Code to support this level of protection and the burden it presents.

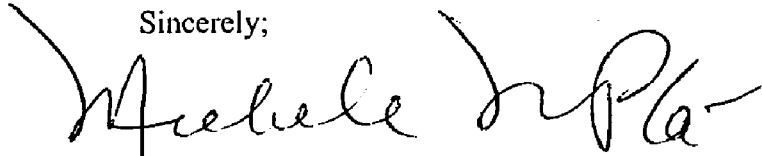
The revised WLA for municipal wastewater are dramatic reductions that will, in some cases be difficult to meet. BACWA continues to strongly support the group wasteload allocation (as all other sources also have group numbers) which is sum of the individual allocation. We believe this is consistent with the remand Resolution, meets the requirement of the Clean Water Act and will provide a high bar for the clean water agencies now and in the years to come.

The TMDL expects our members to be able to meet the interim wasteload allocations (20% reduction) through aggressive pollution prevention practices. With adoption of the TMDL, clean water agencies across the Bay Area will develop and implement dental amalgam programs. Achievement of a 40% reduction, at secondary treatment facilities, will require the implementation of an equitable pollution offset and credits program.

BACWA's attached comments focus on areas of improvements to this proposed TMDL/BPA, such as the CEQA Checklist and areas that are important to BACWA such as water recycling, risk reduction and the WLAs. BACWA once more supports adoptions of the Mercury TMDL and offers technical comments below to strengthen the accompanying staff report and Basin Plan amendment language.

We appreciate the opportunity to comment on the proposed changes and we look forward to working with this Board and staff on issues that will have a meaningful result for San Francisco Bay.

Sincerely;

A handwritten signature in black ink, appearing to read "Michele M Pla", with a stylized flourish at the end.

Michele M Pla  
Executive Director

Cc: William Keaney, SFPUC  
Dave Williams, EBMUD  
Chuck Weir, EBDA  
Jim Kelly, CCCSD  
Dave Tucker, City of San Jose  
Benita Best Wong, EPA HQ  
Alexis Strauss, EPA Region 9  
Dave Smith, EPA Region 9

## **Bay Area Clean Water Agencies Detailed Comments on Proposed Water Quality Control Plan for the San Francisco Bay Basin Related to the Mercury in the San Francisco Bay**

### **1. Develop More Complete CEQA Analysis**

BACWA has compared the environmental checklists prepared for the revised TMDL and the 2004 version of the TMDL. The San Francisco Water Board has stated that the current version of the TMDL is anticipated to have lesser or no impact than the previous version of the TMDL. Given that the requirements are in many cases more stringent, BACWA questions the adequacy and scope of the environmental analysis, particularly in light of the new standard set forth in the case of *City of Arcadia v. State Water Resources Control Board*, 135 Cal.App.4th 1392, 1420 (2006).<sup>1</sup>

**Recommendation;** BACWA recommends that the Water Board compare the checklist from the 2004 TMDL/BPA with this proposed checklist and then either provide an explanation for the claim of less or no impact or make revisions as appropriate.

### **2. The mercury TMDL proposes to establish two numeric fish tissue standards (water quality objectives) for all segments of the San Francisco Bay that appear to go far beyond the draft national US EPA fish tissue guidance criteria.**

BACWA understands the rationale for the establishment of these two new fish tissue mercury objectives, and supports the removal of the 4-day average water column objective, as discussed in more detail below.

The 303(d) listing for which this TMDL is developed was due in part to an interpretation of the Basin Plan's narrative bioaccumulation objective relative to mercury concentrations in fish tissue. The listing and the scientific analysis that has accompanied this TMDL attempt to establish a linkage between the legacy of mercury found in the sediments of San Francisco Bay and mercury that bioaccumulates in the food web, which at elevated levels can be harmful to fish and wildlife.<sup>2</sup>

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<sup>1</sup> The Water Board cannot dismiss this issue as merely unsubstantiated opinion and speculation. Letters and testimony from government officials, such as BACWA and its member agencies, with personal knowledge of the anticipated effects of a project on their communities "certainly supports a fair argument that the project may have a significant environmental impact." (*City of Livermore v. Local Agency Formation Com.* (1986) 184 Cal.App.3d 531, 542, 230 Cal.Rptr. 867.)

<sup>2</sup> The 303(d) listing states: "Current data indicate fish consumption and wildlife consumption impacted uses: health consumption advisory in effect for multiple fish species including striped bass and shark." Consumption of fish and wildlife by humans are the only uses that form the basis of the current 303(d) listing. Thus, the meaning attributed to "wildlife consumption" contained in the TMDL goes beyond the basis for listing. While protecting wildlife species and habitat may ultimately be desirable, these are not

BACWA is concerned, however, that the San Francisco Water Board staff has taken the EPA suggested regulatory approach and has made the proposed new objectives more stringent than warranted. It also appears that the San Francisco Water Board has relied on a USFWS guidance document that has not been fully peer reviewed or vetted in the scientific community. Examples of several areas of concern to BACWA agencies include:

- The San Francisco Water Board staff has inserted an unnecessary level of conservatism in the development of these proposed standards. For example, the large fish tissue standard of 0.2 ppm mercury is derived by utilizing a conservative assumption that the fish consumption rate applicable to San Francisco Bay fish is twice EPA's recommended default consumption value. It does not appear that the conservatism has been fully addressed in the Water Code Section 13241 analyses contained in the Staff Report or in the CEQA document developed by the staff to support the original draft TMDL (or the revised Staff Report).
- The technical derivation of the small fish tissue (3-5 cm) objective is unclear. There is a lack of calculations or other derivation data supporting this proposed objective are presented in the Staff Report. In addition, the inclusion of the proposed wildlife standard appears to go beyond the basis used to support the 303 (d) listing (see footnote 1) and may need further CEQA and Water Code 13241 analysis.
- Previous technical information submitted to the Board staff as part of the public review process highlights the uncertainty as to whether mercury concentrations in white sturgeon, leopard shark, and striped bass are "truly elevated." As noted in comments by Exponent, white sturgeon and leopard shark are relatively long-lived species that naturally exhibit higher levels of mercury bioaccumulation and that mercury data for mercury in shark in San Francisco Bay are not significantly different from concentrations in shark measured by the US FDA in representative uncontaminated areas. (see Exponent comments to San Francisco Water Board dated June 8, 2004, which are hereby incorporated by reference).

In addition to the concerns over the derivation of these two new fish tissue objectives, BACWA has concern over the completeness of the Water Code section 13241 and the CEQA analyses included in the Staff Report.

**Recommendation:** BACWA recommends that the scope of the environmental analysis be consistent with past analyses, particularly in light of the new standard set forth in the case of *City of Arcadia v. State Water Resources Control Board*, 135 Cal.App.4th 1392.

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uses for which the Regional Board has demonstrated that CWA technology-based limits are unable to achieve water quality standards/objectives. 33 U.S.C. §1313(d)(1)(A).

1420 (2006). BACWA also recommends that the requirements of the Water Code section 13241 be reviewed and applied to the two new fish tissues standards

**3. Implementation plan for new standards is the revised WLA for municipal wastewater.**

It is BACWA's expectation that the Mercury TMDL/BPA itself will be considered the full implementation mechanism of applicable water quality objectives pursuant to Water Code section 13242. BACWA believes that the Staff Report anticipates that the implementation of the TMDL will result in the attainment of these water quality standards. Thus, the projected 40% reduction in mercury concentrations prescribed for in the TMDL for municipal wastewater is meant to result in the attainment of the proposed fish tissue standards.

BACWA is compelled to reiterate that the public clean water agencies' contribution to the input of mercury to the Bay, and any corresponding reduction sought in the TMDL is extremely small. After the 40% reduction for some municipal wastewater would represent, 11 kg/yr out of the 698 kg/yr total loading set forth in Table 4-v.<sup>3</sup> This is still only approximately one percent of the total loading that will be achieved by unfairly targeting and increasing the regulatory burden on public agencies that have already stepped up to the plate to help with mercury reduction efforts.<sup>4</sup>

BACWA also takes no comfort in the fact that these reductions will not be all that is required of its members as the Staff Report also states that if monitoring shows that the beneficial uses are not being protected, the TMDL will be revised. BACWA would strongly object to any attempts by the San Francisco Water Board, the State Water Board, or EPA proposing the conversion of any applicable fish tissue objective into mercury or methylmercury concentration limits for water quality based objectives or water quality based effluent limits.

**Recommendation:** BACWA recommends that the San Francisco Water Board incorporate into the TMDL the concept that if greater load reductions are achieved from other non-municipal sources than expected, then the municipal agencies' allocations can be increased in accordance with the definition of TMDL in 40 C.F.R. §130.2(i) (Stating that if BMPs or other nonpoint source pollution controls make more stringent load allocations practicable, then wasteload allocations [on point sources] can be made less stringent.)

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<sup>3</sup> This table should separate municipal loading from industrial loadings and not lump them together as the two discharges are not identical.

<sup>4</sup> Recent scientific literature indicates that "... loadings to water in the San Francisco bay Estuary are dominated by runoff from the Central Valley catchment and remobilization of contaminated sediments deposited during past mining activities." Macleod ES&T, vol. 39, No.17, 2005.

#### **4. Vacate the water column four-day average mercury water quality objective**

BACWA fully and strongly supports the proposal to vacate the 4-day average mercury objective. In our comments to the State Water Board in 2005, on the Mercury TMDL, BACWA stated the 4-day mercury water quality standard was poorly designed with a bad technical basis, in addition to being obsolete. This outdated water quality objective does not take into account the conditions in the Bay where there is shallow water and high winds, causing the sediments to be resuspended in the water column.

**Recommendation:** BACWA supports withdrawal of this outdated standard through the Basin Planning process.

#### **5. Review revised wasteload allocations and implementation plan for municipal wastewater over time.**

BACWA believes that the changes to the municipal wastewater section of this proposed TMDL/BPA are consistent with State Water Board Resolution No 2005-0060. BACWA reiterates its point that reducing 40% of the POTWs' approximately one percent (1%) contribution of mercury to the Bay will have little or no measurable impact on mercury fish tissue levels.

Whether this TMDL is adopted or not, BACWA's members will continue focusing their efforts every day on excellent plant operation, continuing their award winning industrial pretreatment and pollution prevention programs, and working with all stakeholders on the implementation and adaptive management of programs aimed at reducing mercury efficiently in the Bay.

BACWA understands that the TMDL expects our members to be able to meet the interim wasteload allocations (20% reduction) through aggressive pollution prevention practices. Based on research and analysis undertaken by BACWA and other clean water associations (National Association of Clean Water Agencies, the Water Environment Federation and the Water Environment Research Foundation), control of dental mercury in amalgam may present the most effective pollution prevention program for the Bay Area. Other pollution prevention programs, such as thermometer exchanges and household hazardous waste collection of fluorescent light bulbs, are already being implemented across the Bay Area by both municipal clean water and stormwater agencies. Under this TMDL, clean water agencies across the Bay Area will develop and implement dental amalgam programs over the next five years. Clean water agencies will also look at other pollution prevention programs across the country to determine if new and innovative programs exist that we have not yet been implemented, but which might be effective in achieving the 20% reduction within ten years.

Achievement of a 40% reduction, at secondary treatment facilities, will require the implementation of an equitable pollution offset and credits program. Any changes in the

treatment processes and facilities for clean water agencies that may be implemented over the next 20 years would be focused on overall rehabilitation and technology improvements as well as water recycling. It is not an expectation that the reductions from 14 kg/yr to 11 kg/yr of mercury would require the investment of tens of millions of dollars per year to build and operate advanced wastewater treatment where it does not now exist. Although the technology exists to reduce the effluent loading, the cost of such technology is not at all reasonable. BACWA is committed to a periodic review of treatment technologies and enhancements to determine if new reasonable and feasible approaches to reducing the mercury in effluent are developed. If such advancements do not materialize within ten years, a fully developed, equitable and implementable offsets and credits program may be the **only** way for the clean water agencies to meet the proposed 40% reduction.

The State Water Board Resolution No 2005-0060 states in Resolved #8 that the State Water Board will develop a State policy for water quality control that establishes alternative methods to allow dischargers to meet limits to achieve water quality standards. The Resolution states:

*"The policy shall not include requirements that would leverage existing point source discharges as a means of forcing dischargers to bear more than their fair share of the responsibility for causing or contributing to any violation of water quality standards. In this context "fair share" shall refer to the discharges' proportional contributions to the impairment."*

BACWA member agencies will work closely with the San Francisco Water Board and the State Water Board to ensure that as an offset/credits program is developed it will be consistently with this policy direction and that the offset ratios developed will be based on technical and scientific information and related to the proportional share and responsibility of clean water agencies for TMDL implementation.

**Recommendation:** BACWA recommends that the 40% reduction be contingent on the development of a statewide offsets program, because without an offset program, BACWA members may not be able to comply with the TMDL allocations, especially since these allocations have made no allowance for growth in a vibrant Bay Area economy.

**6. Include recycled water credit transfer provisions to encourage, not penalize water recycling projects**

BACWA is now in the process of developing a grant application for Proposition 50, Chapter 8 water recycling funding. Over the next 10 years, particularly with additional state and federal funding, there will be many more water recycling projects implemented across the Bay Area. In many cases these projects will reduce the mass loading of all pollutants to the Bay. A future issue to consider as recycled water quality is improved will be pollutant concentration and mass loading from recycled water concentrated brine.



In some cases, higher effluent concentrations may result from the water recycling projects. In certain cases the transfer of municipal wastewater effluent for beneficial reuse would decrease one permittee's mercury mass emission while increasing another permittee's mass emission by a corresponding amount. There would be no net change in the mercury mass discharged to the Bay from such projects; only a change in the location where the mass would be discharged. A specific example is industrial reuse (requiring reverse osmosis or tertiary treated recycled water) where the resultant cooling tower blowdown and/or reverse osmosis reject (concentrate) is discharged via the industry's permitted outfall. This would cut across the municipal and the industrial load allocations.

BACWA believes that inclusion of recycled water credit transfer provisions is consistent with Resolved 3 of the Remand Order (SWRCB 2005) that instructs the Water Board to

"...revise the TMDL to establish individual wasteload allocations, after reconsidering the appropriateness of the policy assumptions used by the Regional Water Board to derive the original wasteload allocations."

The original TMDL policy assumptions used to derive the mercury wasteload allocations did not consider the fact that implementation of certain water recycling projects would result in the transfer of mercury mass loading from one permittee's effluent outfall to another. The TMDL also needs to address water recycling to be consistent with the Water Recycling Law (California Water Code Division 7, Chapter 7, Article 2, Section 13512) that prescribes the legislative intent that

"the state undertake all possible steps to encourage development of water recycling facilities ..."

To comply with the state mandate to encourage water recycling, and to not penalize permittees for using recycled water, the wasteload allocation derivation needs to include a provision that allows portions of individual wasteload allocations, within the overall pooled allocations, to be transferred from one municipal and/or industrial permittee to another.

Inclusion of recycled water credit transfer provisions is also consistent with an additional direction of Resolved 3 that

"In establishing such wasteload allocations, the San Francisco Bay Water Board shall incorporate provisions that acknowledge the efforts of those point sources whose effluent quality demonstrates good performance..."

Point sources implementing water recycling projects have to provide at a minimum tertiary treatment and for boiler feedwater and certain cooling tower applications, reverse osmosis treatment of their secondary effluent. This voluntary implementation of additional levels of treatment certainly "demonstrates good performance" and should be rewarded.

**Recommendation:** BACWA requests that the TMDL, the implementing permits and any offset policy include provisions recognizing the circumstances surrounding water recycling and authorize transfers between individual municipal and/or industrial wasteload allocations where needed to accommodate and promote water recycling.

**7. Carefully apply mass limits and more stringent application of triggers.**

BACWA strongly supports the watershed approach to wasteload allocations, which aggregates the mass limits for municipal clean water agencies. The implementation of individual wasteload allocations and stringent triggers will be problematic if not implemented carefully. The Staff Report states that the individual wasteload allocations/mass limits will not be enforced unless the aggregate mass loading is also exceeded. The permitting mechanism must specifically impose the individual limits only when the aggregate limit is exceeded, and at other times, the individual allocations should function only as a performance trigger which lead to internal investigations. In the unlikely event where the aggregate annual average mercury loading exceeds the annual average mass wasteload allocation for municipal wastewater, the San Francisco Water Board would then pursue enforcement actions against those individual Dischargers whose annual average mercury mass emissions exceeded their individual annual average mass limits.

It is also BACWA's expectation that the annual group wasteload allocation will be measured as a running 12-month average, which is reported as a group allocation on a calendar year basis. The wastewater annual summary report (based on data from the POTW annual reports) would describe mercury discharges, including annual and monthly flows, mercury concentrations, and mercury mass loads, and the sum of all the individual annual mass loads, which could be used to determine watershed-wide compliance with the aggregate allocation.

This approach will ensure that each clean water agency knows what is expected for effluent quality, while at the same time it focuses resources to determine the overall reductions that will be necessary for the attainment of the aggregate allocation without unnecessary enforcement actions being brought and defended against where no real water quality benefits would be realized.

**8. BACWA has committed to conduct methylmercury monitoring.**

BACWA fully understood that the previous version of the TMDL, adopted by the San Francisco Water Board in September 2004, would required methylmercury monitoring as well as technical study to determine local effects and biological uptake of mercury.

BACWA member agencies have already begun developing protocols for effluent methylmercury monitoring, which is expected to begin in late 2006. BACWA has also signed an agreement and contributed funding to a cooperative study with the Water Environment Research Foundation:

- To determine removal efficiencies for mercury and methyl mercury from different wastewater treatment processes,
- To determine if wastewater discharges have different bioavailability than other sources of mercury,
- To determine if other components of wastewater discharge increase the bioavailability of mercury in the receiving water, and
- To determine what receiving water characteristics affect the bioavailability of mercury discharged from wastewater treatment facilities.

These studies will begin in 2006/07 and will likely continue over the next several years, thereby adding to our knowledge and understanding of mercury and how it changes over cycles and variations in the water environment. The intent of the research, as well as other work carried out by the San Francisco Estuary Institute (SFEI), the Clean Estuary Partnership, and other agencies and associations across the country, is to provide an increased knowledge to rely upon when this TMDL/BPA is reopened for adaptive management purposes.

#### **9. Investigate Risk Reduction Management activities**

BACWA supports activities to investigate potential management options aimed at the reduction of risk to the public's health through the efforts of the Clean Estuary Partnership (CEP). In fact, BACWA included in the CEP Risk Reduction Management project in March of 2006, a Wastewater/Recycled Water Functional Areas Document prepared for the San Francisco Bay Integrated Regional Water Management Plan, under Proposition 50, Chapter 8. As this program is better defined, BACWA understands that appropriate communication programs, special studies, and other programs that are intended to result in the reduction of human exposure to mercury will become part of watershed permit for mercury.

BACWA expects that, over the next 12-24 months, these activities will become clearer as will the appropriate role for the CEP and the clean water agencies. BACWA cannot support NPDES permits or other TMDLs requiring clean water agencies to develop, deliver, or finance health care for discrete communities or individuals. Although the State Board Resolution No. 2005-0060 states that "mitigation of health impacts" should be part of a risk reduction program, we firmly believe that the State Board cannot mandate clean water agencies to develop, deliver or finance health care programs, nor was such the intent of the language in the Resolution. Rather, the State Water Board directed "...the San Francisco Bay and Central Valley Water Boards to investigate ways, *consistent with their regulatory authority*, to address public health impacts..." (Emphasis supplied). This directive does not go so far as to allow the Regional Water Board to

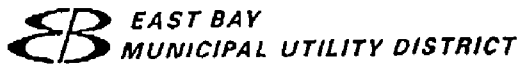
mandate that municipal clean water agencies develop, deliver or finance health care programs for discrete communities or individuals.

BACWA requests that the new last bullet under Risk Management (Appendix A, Proposed Basin Plan Amendment, page A-24) be revised to read:

- “The Water Board, California Office of Environmental Health Hazard Assessment, and California Department of Health Services, investigating ways, consistent with their regulatory authority, to address public health impacts of mercury in San Francisco Bay/Delta fish, including by undertaking activities that reduce actual and potential exposure of and mitigate health impacts to those people and communities most likely to be affected by mercury in San Francisco Bay caught fish, such as subsistence fishers and their families.”

**10. Use adaptive management to apply improved knowledge about mercury sources and control programs and about fate and transport in San Francisco Bay to improve water quality management.**

One of BACWA's main tenets is that decisions regarding the stewardship and protection of San Francisco Bay should be based on the best and most current technical, economic, and scientific information so that, collectively, we can develop programs and solutions with an anticipation of measurable results. For BACWA and its member agencies, this means not only continuing to invest in this knowledge but committing to adaptive management of the Mercury TMDL. BACWA believes that better information regarding mercury sources, whether point sources or non-point sources are important to ensuring that we improve upon this TMDL. Work must continue to better understand the San Francisco Bay ecosystem i.e. erosion, deposition and methylation so that sustainable, results oriented programs are developed through adaptive management. As part of the TMDL implementation, the clean water agencies will be required to develop better knowledge, and it is our expectation that others will also contribute to improving our knowledge base.

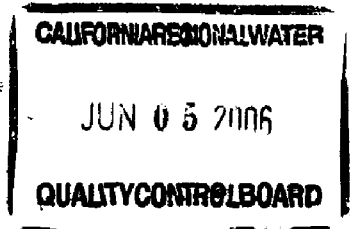


DAVID R. WILLIAMS  
DIRECTOR OF WASTEWATER

June 5, 2006

VIA FACSIMILE

Mr. Bruce Wolfe  
Executive Officer  
San Francisco Bay Regional Water Quality Control Board  
1515 Clay Street, Suite 1400  
Oakland, CA 94612



Re: Amendment to the Water Quality Control Plan for the San Francisco Bay Basin Related to Mercury in the San Francisco Bay

Dear Mr. Wolfe:

The East Bay Municipal Utility District (EBMUD) appreciates the opportunity to comment on the revised portions of the Mercury TMDL/Basin Plan Amendment (BPA). EBMUD supports the comments submitted by the Bay Area Clean Water Agencies (BACWA) on the Mercury TMDL/BPA and would like to further elaborate on the BACWA comments related to recycled water credit transfer provisions to encourage, not penalize, water recycling projects.

EBMUD is a local government entity that serves drinking water to approximately 1.3 million people in its 325- square-mile service area that encompasses portions of Alameda and Contra Costa counties. A limited supply of water, restricted by both nature and by regulatory measures, combined with a growing population have compelled EBMUD to exercise leadership in the area of demand management, as it aggressively finds ways to wisely and efficiently stretch its water resources.

In October 1993, EBMUD established water recycling as an important component of its Water Supply Management Program (WSMP). The WSMP serves as a planning guide for providing a reliable high-quality water supply to the EBMUD service area through year 2020. The WSMP sets a goal of delivering a total of 14 million gallons per day (mgd) of recycled water by the year 2020. In addition to the WSMP, as part of its Urban Water Management Plan (UWMP) adopted in 2005, EBMUD is committed to delivering 14 mgd of recycled water by the year 2020 to limit customer rationing during a critical drought to 25 percent. EBMUD supports the State's goal to recycle 1 million acre-feet of water per year by the year 2010.

There are two major petroleum refineries located within EBMUD's service area, the Chevron Richmond Refinery and ConocoPhillips Rodeo Refinery. These two refineries currently are EBMUD's largest users of potable water and have the greatest potential to use recycled water

Mr. Bruce Wolfe  
June 5, 2006  
Page 2

for nonpotable water uses. Since 1995, Chevron has used approximately 3 mgd of tertiary treated recycled water for cooling at the Richmond Refinery. EBMUD is aggressively pursuing recycled water projects with both refineries that would replace potable water currently used for boiler feedwater with high-purity recycled water. The two projects would offset over 5 mgd of potable water, thus conserving EBMUD's limited high-quality drinking water supplies. The high-purity recycled water would be produced by further treating secondary wastewater effluent through a microfiltration/reverse osmosis treatment process.

In many cases, recycled water projects will reduce the mass loading of all pollutants to the Bay. In some cases, such as industrial uses of recycled water for cooling or boiler feedwater, higher effluent concentrations may result from the water recycling projects through cooling tower blowdown and/or disposal of the reverse osmosis reject (concentrate) via the industry's permitted outfall. In this case, the transfer of municipal wastewater effluent for beneficial reuse would decrease one permittee's mercury mass emission while increasing another permittee's mass emission by a corresponding amount. There would be no net change in the mercury mass discharged to the Bay from such projects, only a change in the location where the mass would be discharged. The use of recycled water in this case would cut across municipal and industrial load allocations.

EBMUD requests that the TMDL, the implementing permits and any offset policy include provisions recognizing this circumstance and authorizing that recycled water credits be transferred between individual municipal and/or industrial wasteload allocations where needed to accommodate and promote water recycling. EBMUD believes that inclusion of recycled water credit transfer provisions is consistent with State Water Code Section 13512 which states, "It is the intention of the Legislature that the state undertake all possible steps to encourage development of water recycling facilities so that recycled water may be made available to help meet the growing water requirements of the state." It is also consistent with State Water Code Sections 13550 and 13551 that state that use of potable domestic use for nonpotable uses, including cemeteries, golf courses, parks, highway landscaped areas, and industrial and irrigation uses, is a waste or an unreasonable use of water, if suitable recycled water is available.

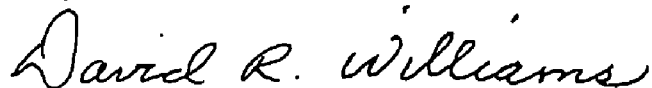
The original TMDL policy assumptions used to derive the mercury wasteload allocations did not consider the fact that implementation of certain water recycling projects would result in the transfer of mercury mass loading from one permittee's effluent outfall to another. To comply with the state mandate to encourage water recycling, and to not penalize permittees for using recycled water, the wasteload allocation derivation needs to include a provision that allows portions of individual wasteload allocations to be transferred from one municipal and/or industrial permittee to another.

EBMUD appreciates the opportunity to comment on the mercury TMDL and work with the Board and staff to ensure the mercury TMDL does not limit the ability for agencies to continue to develop water recycling projects as one means to addressing future water supply challenges.

Mr. Bruce Wolfe  
June 5, 2006  
Page 3

If you have any questions, please contact me at (510) 287-1496.

Sincerely,



DAVID R. WILLIAMS  
Director of Wastewater

DRW:JRL:sma

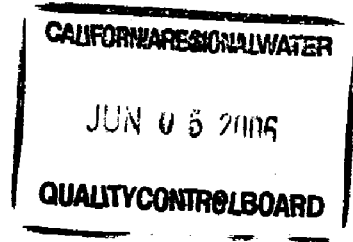
cc: Jan Lee, EBMUD  
Tom Hall, EOA

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June 5, 2006

Ms. Carrie Austin  
San Francisco Bay  
Regional Water Quality Control Board  
1515 Clay Street, Suite 1400  
Oakland, CA 94612



**SUBJECT:** Proposed Revisions to the San Francisco Bay Mercury TMDL Amendment

Dear Ms. Austin:

The City of San Jose (City), on behalf of the San Jose/Santa Clara Water Pollution Control Plant (Plant) and the City's Urban Runoff Pollution Prevention Program, would like to thank you for the opportunity to submit technical comments on the proposed revisions to the San Francisco Bay Mercury TMDL and the proposed Basin Plan amendment. The City strongly supported the original Mercury TMDL adopted by the Regional Water Board last September with its innovative use of aggregate waste load allocations along with individual triggers for municipal dischargers. The City finds it quite discouraging that there continues to be a perception that additional reductions are necessary for the municipal community, who contributes an extremely small percentage of the total mercury loading to San Francisco Bay. The following comments are offered to support and to improve the proposed modifications to the Mercury TMDL and accompanying Basin Plan amendment:

The City of San Jose offers its strong support for the following:

- **Removal of the 4-day average mercury water column objective.** The City supports the proposal to vacate the existing Basin Plan 4-day average mercury objective and further recommends that this outdated objective be vacated throughout the region. If the technical basis for the objective is outdated in one portion of the Bay, it is also outdated for the remaining portions of the Bay, and the objective should be removed for all Bay reaches. In 2005, BACWA comments to State Water Board's review of the Mercury TMDL affirmed that the 4-day mercury water quality standard was predicated on an outdated technical basis and was therefore obsolete. In addition, this water quality objective does not take into account the shallow water and high wind conditions typically found in the Bay where sediments are easily resuspended into the water column.
- **Methyl mercury monitoring and research.** The City supports increased monitoring for both total and methyl mercury by all major sources of mercury entering the Bay. Furthering our understanding of mercury fate and transport, and biological uptake in the



Bay and tidal areas is essential to designing effective pollutant reduction programs. The City voluntarily agreed to perform a comprehensive, multi-year study of the fate and transport of mercury, including methylmercury, within the Plant. Results from Phase I indicate that the Plant removes in excess of 95% of total and methylmercury entering the treatment train. This study, scheduled for completion in 2007, will provide valuable information and insight on the fate of mercury through the wastewater treatment process.

- **Revised Implementation Plan for Municipal Dischargers**  
The City strongly supports the proposed compliance mechanism outlined in this section, pursuing enforcement action on individual dischargers only if the aggregate mass limit is exceeded. It holds discharger's accountable for their individual discharge levels without being overly burdensome to a group that is contributing very little mercury to the Bay.
- **Establishment of a watershed-based allocation program.** The City strongly supports the development of an approach that would provide credit for strategic removal of mercury from the watershed that may not be directly associated with a specific allocation such as an offset program.

Issues of concern:

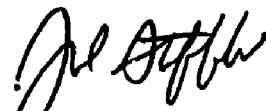
- **Establishment of two numeric fish tissue standards for the San Francisco Bay.** The City understands the necessity to develop appropriate fish tissue standards for all waters of the State, however the City questions the breadth of the regulatory approach taken by the Regional Water Board staff in their development of site-specific standards for San Francisco Bay. The development of these standards is predicated upon scientific uncertainty and conservative assumptions, limited technical information and our weak understanding of mercury dynamics in the Bay. The City believes the derivation and justification of these two new fish tissue standards warrant a more comprehensive Water Code Section 13241 and CEQA analysis.
- **Table 2-1. Existing Total Mercury Numeric Water Quality Objectives.**  
The City believes the discussion of this table in the Staff Report is misleading. The City is of the opinion that the California Toxics Rule (CTR) criterion for human health of 0.51 µg/L 30-day average is the only objective that applies to the South Bay below Dumbarton Bridge. The table lists the 4-day average or the 1-hour maximum for the South Bay. CTR Table 3-3, footnote "a" states, "Unless a site-specific objective has been adopted, these objectives shall apply to all marine waters except for the South Bay south of Dumbarton Bridge, where the California Toxics Rule (CTR) applies." Please clarify Table 2-1.

- **Revised Waste Load Allocations and Implementation Plan for municipal dischargers.**

The approach to reducing POTW loads through "aggressive pollution prevention and other cost-effective mercury reductions methods"<sup>1</sup> would appear a practical approach to meeting the requirements of the State Water Board Resolution No 2005-0060. However, there should be a practical recognition that not all POTWs may realize further significant reductions in this manner. Most municipal dischargers already have mercury reduction activities either alone or in conjunction with their urban runoff programs or household hazardous waste programs. Furthermore, the Plant's effluent has remained relatively constant during the past decade approximating 2 parts per trillion for total mercury. The Plant expects to achieve the proposed reductions through its advanced treatment capabilities and continued source control efforts such as enhancement of the dental amalgam program. However, the City has concerns about how growth in water recycling (R.O. brine) will affect our continued ability to maintain these low loading levels. An off set program must become a priority to help all municipal dischargers in the near future.

The City of San Jose incorporates herein by reference the comments submitted under separate cover by the Bay Area Clean Water Agencies and the Bay Area Stormwater Management Agencies Association. The City of San Jose acknowledges the Regional Water Board staff's dedicated efforts to revise the Mercury TMDL and Basin Plan amendment in response to State Board Resolution No. 2005-0060. City staff looks forward to working collaboratively with Regional Water Board staff to address our comments and recommendations. If you have any questions please contact David Tucker at 408-277-5695.

Sincerely,



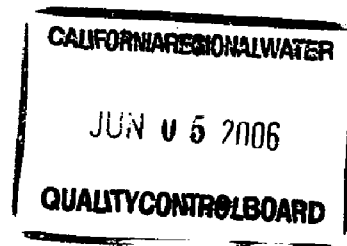
John Stuffelebean  
Director

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<sup>1</sup> Mercury in San Francisco Bay, Proposed Basin Plan Amendment and Staff Report For Revised TMDL and Mercury WQO, pg. III-5.



June 5, 2006



Bruce Wolfe  
Executive Officer  
California Regional Water Quality Control Board  
San Francisco Bay Region  
1515 Clay Street, Suite 1400  
Oakland, CA 94612

Re: Proposed Amendments to the Water Quality Control Plan  
for the San Francisco Bay Basin Related to Mercury

Dear Mr. Wolfe:

Sunnyvale has participated in the development of the proposed TMDL from its inception, and we thank you for this opportunity to provide comments on the Proposed Basin Plan Amendments related to mercury in San Francisco Bay, as set forth in the Draft for Public Review dated April 21, 2006. Our counsel is submitting additional comments of a legal nature.

Sunnyvale respectfully requests that it not be included among the treatment plants whose wasteload allocation for mercury is reduced. The reasons for this request are as follows:

1. **Sunnyvale's high performance and small allocation should qualify it for the same treatment that the Regional Board is giving other small dischargers: it would be consistent with the policies laid out in the staff report and the State Board's resolution to include Sunnyvale in the category not required to make further mercury reductions.** Sunnyvale's advanced treatment POTW is one of the best-performing POTWs in the Bay Area based in terms of efficiency of mercury removals. Its POTW reduces influent mercury by 98%, achieving an average of 4 nanograms per liter in plant effluent. Sunnyvale's current allowable permitted mass is 0.49 kg/yr. Sunnyvale's allocation under the proposed TMDL is only 0.15 kg/yr, a significant reduction from the 2003 permit mass limit. The TMDL contains a threshold of < 0.1 kg/yr for "small" POTWs (and loadings) below which no further reductions are required. The reasons given in the staff report for eliminating the smaller treatment plants (arbitrarily defining "small" as <0.1 kg/yr) from reductions in their wasteload allocation (small contribution and assumed high performance) apply equally to Sunnyvale.<sup>1</sup> We strongly urge that the revised WLA be amended to state that, in addition to excluding plants with <0.1 kg/yr allocations, the TMDL should exclude all advanced treatment plants with <0.15 kg/yr as well. This is the only way that the TMDL can equitably reflect the Regional Board's stated policy goals as well as the meet the goals of the State Board's resolution (see # 2 below). If

<sup>1</sup> Staff Report, p. III-5.

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the Regional Board does not agree with this request, the City requests that the Regional Board explain how advanced highly performing treatment plants such as the City are to meet the lower WLA.

2. **The State Board Resolution 2005-0060 requires that Sunnyvale's high performance be recognized with no further reduction.** Including Sunnyvale in the 20% reduction category is fundamentally inconsistent with the express terms of Resolved 3 of the State Board's September 7, 2005 remand order (Resolution 2005-0060). The State Board clearly ordered the Regional Board to leave dischargers such as Sunnyvale with no further reduction, let alone one as drastic as the one being proposed.<sup>2</sup> The Regional Board should not disregard the letter and intent of Resolution 2005-0060 in Sunnyvale's case.
3. **It is not possible for Sunnyvale to achieve reductions from either better pretreatment or "other cost-effective mercury reduction methods."** The assumption in the staff report that plants with advanced treatment will be able to achieve a 20% reduction "through implementation of aggressive pollution prevention and other cost-effective mercury reduction methods"<sup>3</sup> is absolutely inappropriate in Sunnyvale's case. Because it now removes 98% of influent mercury, in order to achieve a reduction of .03 kilograms, Sunnyvale would have to eliminate influent mercury by approximately 1.5 kilograms. There are no known controllable sources of mercury in Sunnyvale that approach anywhere near that figure, either individually or collectively. Further, as described in previous comments submitted to you and as summarized in Attachment 1, in order to achieve its outstanding performance, Sunnyvale has already implemented all "cost-effective mercury reduction methods," and there is nothing further it can do. Accordingly, the Regional Board should re-examine Sunnyvale's case. In this regard, we request that the City be given credit for the reduction in mercury loads to the Bay attributable to the City's water recycling program and the treatment of incident rainfall that amounts to approximately 0.007 kg/yr.
4. **The revised wasteload allocation reduces Sunnyvale's permitted plant capacity by approximately 30%, thereby taking away a very valuable asset needed for the future.** Under the originally proposed TMDL Sunnyvale would have lost approximately 2.5 million gallons per day of capacity out of its design capacity of 29.5 mgd. The proposal for an additional 20% reduction would result in a loss of nearly twice that amount. This is a clear "taking" of over a quarter of permitted existing plant capacity that Sunnyvale has already built and paid for. To the extent that Sunnyvale did not need all of this capacity to meet its own growth requirements, it could be marketed to others who have outgrown their own plants. Thus, the loss of capacity would have significant financial implications. The Regional Board should take this into consideration and not ask Sunnyvale to sacrifice such a high amount of potentially needed and valuable capacity<sup>4</sup>.

<sup>2</sup> Resolved 3 contains the following pertinent language: "In establishing such wasteload allocations, the San Francisco Bay Water Board shall incorporate provisions that *acknowledge the efforts of those point sources whose effluent quality demonstrates good performance*, and require improvements by *other dischargers*." (emphasis added)

<sup>3</sup> Staff Report, p. III-5.

<sup>4</sup> Please note that if additional capacity is required to keep up with growth, it is obvious that some new additions to the existing plant will be required, that the City plant is on or very near to wetlands and other sensitive areas, and that there will be impacts on wetland areas, construction impacts, traffic, noise, etc. associated with that construction.

5. It is too risky and thus inappropriate to make Sunnyvale dependent for any future growth on the availability of offset and other programs that may not be available in time to provide relief. Faced with no available means of achieving greater mercury removal efficiency in order to provide for growth in its flow due to future development, Sunnyvale would only be able to keep up with normal and inevitable growth if the State Board develops entirely new policies, such as an offset policy that would allow Sunnyvale to increase its mercury allocation by purchasing offsets from some as-yet-to-be-identified source(s). Sunnyvale has to ask: what progress has the State Board or, for that matter, any agency in the U.S. made towards developing such a policy, although it has been discussed for many years? What assurances can the Regional Board give Sunnyvale and the other Bay Area POTWs that such a policy will become available in the next ten years? What assurances can the Regional Board give as to whether the financial cost of procuring mercury offsets will be reasonable? At the very minimum, the TMDL should expressly provide that the proposed reductions are contingent upon such an offset policy being in place, and with reasonable costs.

Sunnyvale believes that the reasonable protection of beneficial uses from controllable mercury sources in and to the Bay should be a high priority for all Bay Area public agencies and citizens. We take this task very seriously. Therefore, we believe a fair, objective and transparent TMDL and related BPA based on the best available information and sound science is important to its legitimacy, legality, public confidence and ability to implement. Again we appreciate the extensive efforts that the Regional Board has made in attempting to establish such a TMDL for mercury. We hope that the Regional Board will recognize the legitimacy of Sunnyvale's concerns and accept our recommendation for a minor, but important, revision to the proposed wasteload allocation.

Sincerely,



Marvin A. Rose, P.E.  
Director, Public Works

Cc: Adam W. Olivieri  
Robert C. Thompson  
David Kahn  
Kathryn A. Berry

Attachment 1 "The TMDL Does Not Recognize That There are Very Limited if any Mass Reduction Options Available to Advanced Secondary Treatment Plants such as Sunnyvale"

## Attachment

### The TMDL Does Not Recognize That There are Very Limited if any Mass Reduction Options Available to Advanced Secondary Treatment Plants such as Sunnyvale

There are no reasonably feasible options for reducing Sunnyvale's mass discharge of mercury given the significant past efforts at reducing overall metals discharges. Sunnyvale evaluated this same issue in an EOA October 18, 2002 memo titled "Draft Sunnyvale Mercury Mass Limit Calculations Case Study" which was developed as part of the City's 2003 NPDES permit reissuance. Excerpts from the memo on the feasibility of various control options are provided below.

Studies in the region and nationally (e.g., by Palo Alto and by the Association of Metropolitan Sanitation Agencies (AMSA)) have typically found the majority of mercury to be coming from dental offices and from human waste (in food and from amalgam filling erosion). Sunnyvale annually conducts wastewater collection system monitoring and prepares a report on the sources of copper, nickel and mercury. In 2003, the largest source of mercury was the residential sector (73% of the total). The next largest source was commercial (15%), followed by industrial (8%), "other" (2.1%) and water supply (1.8%). Human waste, laundry grey water, and household products are the major sources of mercury.

**Plant Optimization:** The treatment plant currently reduces mercury influent concentrations by 98% and produces an effluent that contains an average mercury concentration of 4 ng/L<sup>5</sup>. Given the current low effluent concentrations it is unlikely that concentrations could be lowered significantly through further plant optimization. This conclusion is supported by the fact that Sunnyvale effluent total suspended solids concentrations are already very low, in the 8 mg/l range (less than 50% of the monthly average effluent limit of 20 mg/L).

**Pollution Prevention:** The City has mature pollution prevention and pretreatment programs. Sunnyvale began implementing its Federal Pretreatment Program in the mid-1980's. During 1990-1994 the City implemented increased waste minimization efforts following issuance of NPDES permit Order Nos. 88-176 and 90-70. This time period included the initial implementation of Reasonable Source Control Measures (RSCMs) as identified by industrial users in their Mass Audit Studies. The remaining RSCMs were implemented during 1995-1997. The City has already included dentists in its pollution prevention efforts and is continuing its efforts to deliver and redeliver BMP type information to dentists.

Work by AMSA (cited by the Regional Board) estimated that implementation of pollution prevention and source control measures might provide influent load reductions of 26 to 33 percent (perhaps less depending on the extent of control measures already in place). However, even assuming full implementation of these measures, effluent concentrations were only predicted to be reduced by 2% to 3%.

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<sup>5</sup> The regression graph of Sunnyvale influent and effluent mercury concentrations in Figure A-2 of the EOA 10/18/02 memo clearly illustrates that influent and effluent concentrations are not closely related. A decrease in influent concentrations, through pollution prevention, will not necessarily lead to a discernable decrease in effluent concentrations.

**Water Recycling:** The City has been proactively pursuing water recycling as a means of reducing overall discharges to the Bay since the early 1990's. Sunnyvale has to date invested over \$20 million in recycled water production and distribution facilities. Recycled water production during 2004 and 2005 averaged a total of 275 million gallons/yr, thus reducing the discharge of mercury to San Francisco Bay by approximately 0.004 kg/yr.

The City has completed a Water Recycling Master Plan that it keeps updated and uses as part of its efforts to incrementally expand to additional urban irrigation sites within its core distribution network. The Master Plan found that it would cost the City approximately an additional \$20 million to extend its existing distribution system to the remaining major landscape irrigation sites in the City. That expenditure would achieve approximately an additional 1 mgd on an annual average basis. One more mgd of effluent recycled, containing 4 ng/L mercury, would only remove approximately 0.0055 kg/yr (5.5 grams/yr) from the amount discharged to the bay.

**Water Conservation:** The City already has a water conservation program in place and believes that most of the significant reductions have already been achieved. Recent activities include a showerhead/faucet aerator replacement program (free to residents), water-wise house call program (free to residents), residential clothes washer rebate Program-Energy Star®, commercial clothes washer rebate Program-Energy Star®, ULFT replacement programs (multi-family units, low income, elderly, disabled and commercial facilities), hotel water conservation program, irrigation technical assistance program and Project WET (Water Efficient Technologies) for industry.

**Infiltration/Inflow:** The City has relatively low amounts of I/I, previously estimated to be only 5% of the City's influent flow. The City completed a collection system evaluation survey in 2001 that identified potential projects for their capital improvement program.

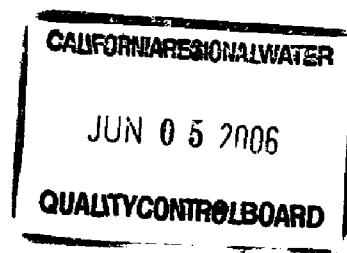
**Treating Incident Rainfall:** While excessive I/I is not a problem, the City is adversely impacted by rainfall in another uncontrollable way. The SFEI San Francisco Bay Atmospheric Deposition Study Part I: Mercury (July 2001) estimated the average mercury concentration in precipitation in the Estuary to be about 8.0 ng/L (0.008 ug/L). The highest concentration monitored in the effluent during the last three years was 8 ng/L, while the average was less than half that contained in rainfall. The WPCP includes approximately 400 acres of secondary treatment ponds. If the City receives approximately 12 inches of rainfall per year that translates to an input of about 400 acre-feet or about 180 MG/year of flow containing 8 ng/L of mercury. Given the average effluent concentration of 0.0038 ug/L, about half of this rainfall-induced mercury loading (0.0027 kg/yr) that would otherwise go to the bay (if the ponds were absent) is removed by the WPCP treatment processes. Basically, this load reduction is roughly equivalent to treating an additional 0.5 MGD of wastewater flow with no credit provided in the TMDL for the load reduction.

**Overall Conclusion:** Since effluent concentrations appear very unlikely to decrease further, and no other practicable options for mass offsets currently appear to exist, the only way to guarantee 100 % compliance with the proposed individual WLA appears to be to restrict flow by restricting wastewater influent to the plant – essentially reduce existing approved plant capacity. This is a clear "taking" of permitted existing plant capacity that the City has already built and paid for. The City could potentially market this capacity, and thus its loss would have financial

implications. Further, no credit has been given to the plant for the reduction of loads to the Bay attributable to water recycling (approximately 0.004 kg/yr) and for treating incident rainfall (approximately 0.0027 kg/yr).

**Questions:** What other reasonable and practicable control options does the Regional Board staff believe are available to the City to rectify the loss in plant capacity? How does the Regional Board staff intend to provide credit for current and ongoing mass reductions such as water recycling and treating incident rainfall?





June 5, 2006

BY FACSIMILE AND E:MAIL

Bruce Wolfe  
Executive Officer  
California Regional Water Quality Control Board  
1515 Clay Street, Suite 1400  
Oakland, CA 94612

Re: Comments on Behalf of the City of Sunnyvale Concerning Amendments to the Water Quality Control Plan Related to Mercury for the San Francisco Bay Region.

Dear Mr. Wolfe:

Thank you for this opportunity to comment on behalf of the City of Sunnyvale on the proposed Basin Plan amendments relating to mercury in San Francisco Bay. Marvin A. Rose, Sunnyvale's Public Works Director, is submitting a separate comment letter. Sunnyvale appreciates all of the efforts that the Regional Board has made to promulgate a program for the control of mercury in San Francisco Bay.

**1. Is it Contrary to the State Board's Order 2005-0060 for the TMDL to Require Sunnyvale's AWT Plant to Reduce its Current Mercury Discharge?**

Ordering paragraph 3 of State Board Order 2006-0060 requires the Regional Board to "acknowledge the efforts of those point sources whose effluent quality demonstrates good performance, and require improvements by *other dischargers*." (emphasis added) As Mr. Rose's comment letter points out, Sunnyvale is an advanced wastewater plant, and its mercury removal efficiency is among the highest of all POTWs discharging into the Bay (98% mercury removal efficiency and an average effluent mercury concentration of 4 ng/l). Sunnyvale's source control program for mercury has been in place for many years, and there are no longer any significant mercury contributors to Sunnyvale's influent stream that remain unregulated. Sunnyvale also recycles a substantial amount of its effluent that would otherwise be discharged to the Bay, and

Bruce Wolfe, Executive Director  
California Regional Water Quality Control Board  
San Francisco Bay Region  
June 5, 2006  
Page 2

there is no reasonable cost-effective way to increase its recycling program. Accordingly, Sunnyvale has no options for further reducing its mercury wasteload in order to meet inevitable growth or to accommodate other prospective users of its treatment capacity. Has Sunnyvale's outstanding performance record been overlooked by the Regional Board staff? Wouldn't it be consistent with State Board Order No. 2005-0060 to exclude Sunnyvale from the list of "other dischargers" subject to reduced individual WLAs.<sup>1</sup>

## 2. Is the Staff's Approach to Growth Reasonable?

Sunnyvale has to ask whether the Staff's approach to accommodating both near- and long-term growth is reasonable. The population of the Bay Area will undoubtedly grow substantially over the next 120 to 200 years, along with business activity. Population growth will undoubtedly increase the mercury loading at the POTWs by a substantial, if not precisely quantifiable, amount during that time.

There is nothing in the Clean Water Act that *prevents* the Regional Board from making a reasonable accommodation for future growth.<sup>2</sup> Sunnyvale is justifiably concerned that the Regional Board is placing restrictions on the POTWs that will eventually come back to haunt us all, sooner if not later.

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<sup>1</sup> The proposed additional 20% reduction in Sunnyvale's wasteload allocation under the revised TMDL would prevent the City from utilizing a substantial additional percentage of that design capacity. Unless a way can be found for Sunnyvale to obtain an increase in its proposed mercury allocation, the Lower South Bay faces the potential loss of use of a significant portion of one of the most efficient POTWs in the Bay Area. On the economic side, Sunnyvale could be deprived of a potentially valuable source of revenue or forced to pay such exorbitant amounts for addition mercury allocation as to result in the same thing, as discussed below.

<sup>2</sup> Staff's asserts that "Neither the federal Clean Water Act nor its implementing regulations mandate that growth be considered, accommodated, or accounted for in setting allocations." Response to Comments, p. 63. Whether or not the Act "mandates" accommodating growth is beside the point. The question is whether it makes sense to accommodate growth. The U.S. Environmental Protection Agency obviously thinks so, since it promulgated a final regulation *requiring* a growth allowance in TMDLs. The regulation promulgated as 40 C.F.R. 130.32(b)(10) required as an element of a TMDL: "Allowance for reasonably foreseeable increases in pollutant loads including growth . . ." Although the final regulation was ultimately withdrawn following a change in the national administration (68 FR 13608, March 19, 2003) and did not take final effect, it serves as clear notice that the professional staff of the Agency, including its lawyers, obviously took the position that the Clean Water Act authorizes a TMDL to have a growth allowance and authorizes a regulation that requires one. The preamble stated: "EPA is promulgating this requirement at § 130.32(b)(10) . . . to ensure that TMDLs take into account potential increases in loadings regardless of their cause. EPA believes accounting for any such potential increases is a necessary step in setting loads at a level necessary to implement standards and accordingly is authorized by § 303(d)(1)(c)." 65 FR 43586, 43624. (emphasis added)

The reasoning behind the Staff's position on growth is puzzling. The Staff takes the position that addressing post-2025 growth would be "speculative."<sup>3</sup> And as for the pre-2025 period, the reasons previously advanced for how the TMDL accommodates growth need to be seriously reexamined now that the group WLA is proposed to be reduced to 11 kg/yr. Prior to the proposed reductions, the Staff maintained that a 17 kg/yr group WLA was sufficient to accommodate any anticipated mercury increases<sup>4</sup> through "slight improvements in treatment plant efficiency and increased water re-use,"<sup>5</sup> or through the flexibility created by the "robust estimate" of current loadings upon which was calculated at 17 kg/yr, although the measured load was only 11.4 kg/yr in the 2000-2003 period.<sup>6</sup>

But now where are we? The proposed 11 kg/yr WLA is obviously not only below the 99% confidence level for current performance, it is below *actual* current performance. Thus, the TMDL no longer has the slack in the calculation to rely on to meet growth. The Staff assumes that the required reduction can be achieved by "reasonably foreseeable measures and improvements in treatment technology,"<sup>7</sup> or "aggressive pollution prevention and other cost-effective mercury reduction methods, wastewater treatment system improvements, and the implementation of a State-developed offset program that establishes pollution offsets and credits."<sup>8</sup> Growth is presumably to be accommodated through these same measures, subject to

<sup>3</sup> Response to Comments, September 2, 2004, p. 52. There is little comfort to be obtained from either Staff's assertion that it "would be speculative" to account for growth past 2025, and its claim that the Regional Board would be able to rely on its ability to change the TMDL in response to changing conditions through "adaptive implementation." In the first instance, the prospect for a very large population increase in the Bay Area's population in the next 120 to 200 years is not "speculative" at all. In the second instance, the Regional Board's alleged "flexibility" to parcel out increased WLAs for mercury is highly problematic, as shown in the following discussion of the potential impacts of the federal anti-backsliding law.

<sup>4</sup> The Staff evidently doesn't believe that there is a close relationship between the Bay Area's population growth and increased effluent (mercury) discharges. It claims that, although population grew by 25% from 1985 to 2002/3, effluent increased by only 4%. It believes that, since ABAG projects only a 14% population increase between 2000 and 2025, the accompanying projected increase in mercury should be seen to be accommodated by the TMDL's "robust estimate of current loads" used to calculate the previous group WLA of 17 kg/yr. Query: Were there other factors (such as the business cycle or weather patterns) that influenced effluent loads between 1985 and 2002/3? What if the actual increase in mercury discharged (for which an accurate comparison may be impossible due to the change in analytical methodology that occurred during that period) was much more, in which case the Staff's projection for 2025 is too low? If the mercury load due to growth is actually much larger, can growth still be easily accommodated, bearing in mind that the Staff is now proposing a group WLA of 14 kg/yr?

<sup>5</sup> Johnson and Looker, "Responses to Scientific Peer Review Comments San Francisco Mercury TMDL," May 18, 2004, p. 7 (response to the comments of one of the peer reviewers, Prof. David Sedlak).

<sup>6</sup> Regional Board Staff Responses to Comments, September 2, 2004, p. 52.

<sup>7</sup> Staff Report, April 21, 2006, p. III-5.

<sup>8</sup> Staff Report, April 21, 2006, p. III-5.

the future use of "adaptive implementation" to change the WLA's if these measures are insufficient.

From Sunnyvale's perspective, the Staff's assurances provide little comfort. First, "aggressive pollution prevention" may not be nearly as effective in reducing effluent mercury as the Staff seems to believe, since most POTWs in the Bay Area have already implemented such programs.<sup>9</sup> Sunnyvale's source control program has long ago tapped out all potential mercury sources.<sup>10</sup>

Second, as Sunnyvale has pointed out at every opportunity, the Regional Board can't reasonably expect Sunnyvale itself to achieve any further mercury reductions by implementing *any* of the other measures the Staff is recommending.

Third, the "State-developed offset program" is a far-distant prospect. Sunnyvale has seen no evidence of staff work to develop such a program, and it sees the problems in creating such a program to be daunting.<sup>11</sup> The Staff admits that "we do not have the details worked out at this time,"<sup>12</sup> and now the entire matter seems to have been shifted to the State Board. Conceptual problems inherent in any offset and trading program have never been addressed: whether any credit will be allowable for activities taking place outside of the Bay Area that might conceivably have a positive impact on mercury loadings; whether reducing mercury sources not included in the inventory on which the TMDL is based can be used for credit; what the offsetting ratios (mercury reduced elsewhere v. mercury allocation allowed) will be; what the costs of "credits" will be; etc., etc. Sunnyvale is concerned that, if no less expensive means of providing offset credit can be devised, the default position will be to rely on Bay Area POTWs installing filtration or other forms of advanced treatment, which might reduce mercury at some POTWs enough to make "credits" available to other sources *at extremely high cost*.<sup>13</sup>

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<sup>9</sup> See Grovhaug and Lau, Larry Walker Associates, and Abu-Saba, Applied Marine Sciences Inc. "Mercury Treatment by Bay Area Treatment Plants," CEP Project 4.5, September 11, 2003, p. 24. Submitted as Attachment 7 to the letter of comment from BACWA dated June 14, 2004. ("... it should be recognized that pollution prevention and source control have already been substantially implemented throughout the Bay Area.") The report also casts serious doubt on whether from source control programs have, in practice, met expectations, citing an AMSA study.

<sup>10</sup> See Attachment 1 to Marvin Rose's letter dated today.

<sup>11</sup> For example, there is likely to be strong opposition from the environmental community. See the comments of the San Francisco BayKeeper dated June 14, 2004: "The paragraph discussing this idea [for pollution trading programs] is inadequate and should be removed ..."

<sup>12</sup> Response to Comments, September 2, 2004, p. 65.

<sup>13</sup> Grovhaug, et al. have produced one frightfully high estimate of the potential costs of such "credits." The report (cited in fn. 9 above) states (at p. 24): "Addition of filtration to Bay area municipal facilities which do not currently

Can a future bad result be avoided though the use of "adaptive implementation"? Sunnyvale fears that "adaptive implementation" has promised more than it can deliver. The Staff Report section on "adaptive implementation" suggests that the Regional Board will study how reductions in risk might be used to offset mercury in the effluent, presumably allowing increased WLAs. The Staff has said elsewhere that the Regional Board will use "adaptive implementation" to address the growth issue in some unspecified manner.<sup>14</sup> Presumably, the Staff has a theory that the WLAs can be revised if growth becomes a problem. But has the Staff thoroughly examined precisely how this would be accommodated by the federal Clean Water Act's anti-backsliding provisions?

According to Clean Water Act Section 304(d), the NPDES permit terms for individual POTWs that incorporate the wasteload allocations of the individual POTWs can only be revised upward (i.e. to accommodate growth) if the TMDL, as revised, "assures" attainment of the applicable objective. Staff has assured us that this is easy to do, stating: "For example, in the future, a wasteload allocation could be relaxed (increased) as long as there was a commensurate decrease in another load or wasteload allocation."<sup>15</sup> But what happens if the Regional Board goes to the U.S.E.P.A with a "revised" TMDL that allows POTWs to discharge more mercury? One highly likely response is: "You have to show us, *scientifically* (as opposed to the assumptions, guesses and hypotheses underlying the original TMDL), that the new TMDL will attain the objective within the original attainment period and that the decreased WLAs that offset the increased WLAs are based on realistic scientific data. Until then, no changes in WLAs are allowed." Given the oppositional attitude that EPA has taken to date on this TMDL, and the difficulties inherent on predicting what future federal officials at EPA National and Regional Headquarters might demand, such a response is perfectly plausible. Isn't this an unreasonable risk to take? Wouldn't it be more reasonable to account for growth in this original TMDL and avoid the horrendous consequences of a future bureaucratic glitch at EPA? The economic consequences alone to Sunnyvale and many other POTWs are potentially very severe.

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have filtration is estimated to cost an additional \$80 -- \$300 million a year to address projected 2025 flows (723 mgd). The addition of filtration would drop the projected annual mercury loading from 14.8 to 6.3 kilograms per year for municipal effluent." This estimate works out to a *cost per gram of mercury reduced of from \$9,500 to \$35,294 per year* (calculated by dividing \$80 to \$300 million by 8500 grams). As an illustration of the potential economic impact on an individual discharger, Sunnyvale would need approximately 50 additional grams beyond its proposed 120-gram allocation in order to meet all of its future wastewater needs and fully utilize its design capacity of 29.5 mgd. At these figures, the cost to Sunnyvale of acquiring the "credits" produced by filtration (assuming that they were sold at cost and the offset ratio were to be 1:1), would be *from \$470,588 to \$1,764,706 per year*.

<sup>14</sup> Response to Comments, p. 52, ("Moreover, the adaptive implementation process will allow us to review at regular intervals the loads from wastewater facilities and any loading trends potentially related to population changes.")

<sup>15</sup> Response to Comments, p. 66.

**3. Does the Proposal to Adopt the TMDL and the Fish Tissue Objectives Comply with Section 13241 of the Porter-Cologne Water Quality Act?**

Sunnyvale is concerned that the proposed objective may be being adopted without legally sufficient consideration of economic considerations as mandated by Water Code Section 13241. The "Regulatory Analysis" section in Staff Report assigns an annual cost of only \$80 million to the potential cost of constructing AWT upgrades to the secondary POTWs, citing "LWA 2003". The Staff Report concludes that this additional expense would have minimal impacts on sewage rates and the need for additional housing.<sup>16</sup> Is there justification for using only the \$80 million figure? Grovhaug (of LWA) and others prepared a draft report in 2003 that placed a figure of *from \$80 to \$300 million* per year as the cost of putting filtration on the Bay's POTWs with secondary treatment.<sup>17</sup> If the true cost is as much as \$300 million per year, does that change the other conclusions that the Regional Board has reached? Also, the Staff may wish to re-examine the figures used for potential costs of reducing mercury loadings from urban stormwater runoff. My understanding is that the EOA 2000b report has been mischaracterized, and in any event, has been superseded by figures submitted by the stormwater managers in their comments submitted before the June 2004 hearing. Also, why doesn't the economic analysis at least mention the potential costs of projects that might ultimately produce mercury reductions to be considered for offset and trading purposes?

**4. Does the Proposal to Adopt Fish Tissue Objectives Comply with Section 13242 of the Porter-Cologne Water Quality Act?**

The failure to make adequate provision for accommodating growth or even to provide a plausible description of how growth will be allowed, makes the implementation plan inadequate for the purposes of meeting the requirements of Water Code Section 13242.

**5. Does the Proposal to Adopt Fish Tissue Objectives and the TMDL Comply with the California Environmental Quality Act?**

The environmental checklist appended to the new Staff Report indicates "no impact" in a variety of categories, including: "Air Quality," Hazard and Hazardous Materials," "Public Services," "Transportation/Traffic," and "Utilities and Service Systems." This seems odd, in light of the Staff Report's acknowledgement that the construction of new wastewater treatment facilities one of the principal means whereby POTWs with secondary treatment are expected to meet the 40% reduction requirement. There are numerous adverse environmental consequences associated with the construction of major wastewater treatment facilities, including construction impacts (traffic, noise), air quality impacts (traffic during construction); wetlands impacts for any

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<sup>16</sup> Staff Report, p. IV-9.

<sup>17</sup> Grovhaug, et al., cited in fn.13 above.

construction taking place on or near wetland areas (many POTWs are situated in or near such areas); and hazardous waste generation from such facilities, including additional amounts of toxic sludges, including mercury-laden sludges.

The recent decision in *City of Arcadia v. State Water Resources Control Board*, 135 Cal.App.4th 1392, 1420 (2006) reaffirms the long-standing CEQA requirement that a document equivalent to an Environmental Impact Report be produced if a "fair argument" can be made that the project in question will have a significant impact on the environment. Given the need to achieve the 40% reduction, and in the further absence of any provision for inevitable growth, the POTWs will, sooner or later (probably sooner) have to look at construction of AWT facilities in order to reduce their mercury discharges. This is not mere speculation. It is the proffered "offset and trading program" that the Staff Report holds out as the alternative to AWT construction that can be seen as "speculative." Absent any reasonable likelihood that such a program will be developed, there is a "fair argument" that AWT plants may be the *only* way for POTW's to avoid long-term noncompliance with the new stringent WLAs.

Similarly, the stormwater agencies have pointed out that new facilities may be likely necessary to meet the reductions mandated by their WLAs. And even if an offset and trading program is under consideration, there is no discussion of the potential environmental impacts that offsetting projects constructed under such a program may have. The TMDL does not adequately consider the impacts from collection, storage, transportation and disposal of mercury as the result of pollution prevention activities, or increased regulatory requirements for wetlands to avoid methylation of mercury.

The Staff Report and the comment letters and testimony from government officials throughout the Bay Area with personal knowledge of the potential impacts on their communities all support a "fair argument" that the adoption of the TMDL and the objectives will have a significant adverse environmental impact. These are not merely opinion or idle speculation. (*City of Livermore v. Local Agency Formation Com.* (1986) 184 Cal.App.3d 531, 542, 230 Cal.Rptr. 867.)

The Regional Board is required by law to explain the reasons for its environmental conclusions in order to provide the public and concerned stakeholders and opportunity to evaluate the true impacts of the project. (*Federation of Hillside & Canyon Assns. v. City of Los Angeles, supra*, 126 Cal.App.4th 1180, 1198, 24 Cal.Rptr.3d 543.) The CEQA documentation in this case is inadequate.

**6. Is the Regional Board Confident that the TMDL and the Proposed Fish Tissue Objectives Will be Approved by the U.S.E.P.A.?**

EPA approval is needed for both the fish tissue objectives and the TMDL. Has the Regional Board received reasonable assurances from EPA that such approvals will be granted? In the past, EPA has raised numerous objections to the TMDL. Adding the promulgation of new water quality objectives may provide additional grounds for EPA to object. EPA generally

Bruce Wolfe, Executive Director  
California Regional Water Quality Control Board  
San Francisco Bay Region  
June 5, 2006  
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insists on a reasonable amount of scientific and technical back-up for water quality objectives. Given the large number of policy calls and assumptions that have led up to the Regional Board's proposal (eg., the assumption of a linear linkage between environmental mercury and levels of methylmercury in fish tissue), there could be unanswerable scientific and technical questions in EPA's mind.

The implementation plan may raise questions in EPA's mind. EPA has stated its desire to see the states develop means of translating the fish tissue criterion into water column concentrations. Will EPA approve the Regional Board's new objectives without such a translation?<sup>18</sup>

Has EPA's Office of Water signed off on the Regional Board's proposal? Has the EPA Office of Research and Development (especially the Environmental Research Laboratory in Duluth, Minnesota) agreed to approve it? These offices will have the ultimate voice in whether EPA will approve or disapprove the proposals, not just Region 9. Perhaps EPA will make its position clear either in written comments or at the June 14 hearing.

**7. Does the Regional Board Have Authority to Require Dischargers to Pay for Health Monitoring or Health Care as Part of "Risk Reduction"?**

Sunnyvale supports BACWA in its concern that there should be no requirement imposed in permits that the POTWs become responsible for paying for health monitoring or health care. We see no legal basis for permit requirements of this nature.

**8. Do the Regional Board's Proposed New Objectives Meet the Water Code's "Reasonable Protection" Test?**

Water Code Section 13241 is the primary source of the Regional Board's authority to adopt water quality objectives. That Section authorizes the Regional Board to "ensure the reasonable protection of beneficial uses . . ." Does this proposal meet that requirement? There are a number of aspects of the proposal that suggest that the Regional Board has exceeded the bounds of reasonableness. First, it is clear that the scientific foundation of the proposal is extremely weak and is certainly not creditable enough to justify the TMDL's harsh treatment of the POTWs.. The Staff Report admits the scientific weakness of the TMDL by calling for

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<sup>18</sup> In 2003, EPA stated: "When the new methylmercury criterion was published, EPA withdrew its previous ambient human health water quality criteria for mercury as the recommended section 304(a) water quality criteria. At that time, EPA also recognized that this approach differed from the traditional water column criteria approach and suggested ways to relate the fish and shellfish tissue criterion to concentrations of methylmercury in the water column. We must relate tissue concentrations to water column concentrations in order to use the criterion to establish discharge limits for point sources. Fish tissue criteria can be developed and potentially simplify compliance monitoring and site-specific adjustments, yet this does not eliminate the need to develop BAFs." (68 FR 75507, 75512, December 31, 2003) (emphasis added)



“adaptive implementation,” which is another name for acting now and achieving scientific clarity later. The only certainty is that there are no scientifically defensible answers to the key questions, and hence the proposal is founded on a series of assumptions and hypotheses (as identified in my letter of June 14, 2004) that are essentially guesses being made for the purpose of establishing a hypothetical approach. Second, the Regional Board has failed completely to quantify the projected beneficial impact of its proposed controls on the POTWs—a group of sources that collectively contribute less than 1% of the estimated mercury load. The benefits are assuredly minute and, given the 120 to 200 year attainment period, are likely to reduce the attainment period only by a year or so. Even then, the TMDL’s projection of continuing outflow of mercury-laden Bay sediments that occurs following the end of the 120 to 200 year period suggests that the cap on POTW mercury loadings may then quickly become unnecessary. Third, the potential costs imposed on the POTWs and the stormwater agencies have not been adequately recognized in the Staff Report, and no calculation has been made as to what those costs will be over the attainment period. Nor has the Regional Board justified a program that could potentially force Sunnyvale and the other AWT plants in need of credits to pay for the installation of filtration on the secondary plants.

If filtration is the route ultimately selected to meet the WLAs and succeeding growth needs, then the Grovhaug, et al. report cited above (\$80 to \$300 million per year) suggests that the incremental costs could range from \$9.6 billion to \$60 billion over the next 120 to 200 years for the POTWs alone, not to mention aggregate costs to the stormwater agencies. Fourth, the principal beneficial use being protected is human consumption of Bay-caught fish. The population segment at risk is that of subsistence fishermen, who comprise a relatively small percentage of the overall population. This is not to say at all that the welfare of these individuals is not important to protect. But has the Regional Board considered the reasonable likelihood that consumption patterns might change significantly in the future owing to changing cultural and subsistence patterns due to the assimilation of the population subgroup into the culture (and consumption habits) of the general population? What about the effects of the risk reduction steps envisioned by the Staff Report, that hopefully will lead to less fish consumption (and less risk) as the subsistence fishermen are made aware of the dangers of eating Bay-caught fish?

There are alternatives that could be explored that could outweigh the burdens of the present proposal. Only after consideration of those alternatives can the Regional Board explain why it would not be justifiable to provide for a growth allowance in the TMDL. All a growth allowance would do would be to extend the attainment period a year or so (and add minutely to the associated human risk factor). But it would avoid the enormous potential associated costs of the current proposal. The Regional Board should provide a better justification than it has thus far for the imposition of a permanent cap on POTW mercury loadings.

Bruce Wolfe, Executive Director  
California Regional Water Quality Control Board  
San Francisco Bay Region  
June 5, 2006  
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I hereby incorporate by reference the comments being submitted on or about today's date by the Bay Area Clean Water Association (BACWA) and the Bay Area Stormwater Management Agencies Association (BASMAA).

Very sincerely yours,

Robert C. Thompson

CC: Marvin A. Rose, Public Works Director, City of Sunnyvale  
Lorrie Gervin, Water Treatment Manager, City of Sunnyvale  
Adam W. Olivieri, EOA, Inc.  
David Kahn, City Attorney, City of Sunnyvale  
Kathryn A. Berry, Senior Assistant City of Sunnyvale



Western States Petroleum Association  
Credible Solutions • Responsive Service • Since 1907

Kevin Buchan  
Environmental Coordinator

SENT VIA EMAIL

June 2, 2006

Carrie Austin  
San Francisco Bay Regional Water Quality Control Board  
1515 Clay Street, Suite 1400  
Oakland, CA 94612

Subject: WSPA Comments on the Draft Basin Plan Amendment for the San Francisco Bay Mercury TMDL

Ms. Austin,  
The Western States Petroleum Association (WSPA) is a trade association that represents nearly thirty companies that explore, produce, transport, refine, and market petroleum and petroleum products in the western United States.

WSPA submit these comments pertaining to the draft basin plan amendment (BPA) relating to the Regional Board's mercury TMDL.

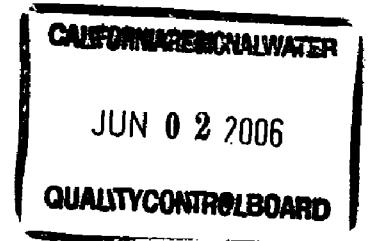
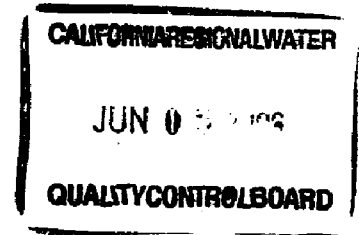
Under the Industrial Wastewater section, the draft BPA reads,

*"Develop and implement effective programs to reduce mercury-related risks to humans and wildlife, and quantify the risk reductions resulting from these activities"*

It is not clear what NPDES permit holders would do within their permit to accomplish this requirement. WSPA members understand that compliance with this requirement is intended to be achieved by supporting efforts of the Clean Estuary Partnership. We request the language be changed to conform with similar elements in this Section, specifically,

*"Develop and implement Conduct or cause to be conducted effective programs by supporting efforts through collaborative programs such as the Clean Estuary Partnership to reduce mercury-related risks to humans and wildlife and quantify the risk reductions resulting from these activities."*

Within the same section, the draft BPA states that NPDES permittees will monitor levels of methylmercury in their discharges. We request the Regional Board make the following addition (in underline):



*"Monitor levels of methylmercury in discharges as appropriate."*

Regional Board staff are expected to soon issue a CWC Section 13267 letter requesting monitoring of methylmercury in NPDES permitted outfalls. In the time between the issuance of the 13267 request and the future approval and incorporation of the BPA into the Basin Plan, the Regional Board will have collected a significant amount of mercury analytical data, which we believe will provide a sound basis for proposing an appropriate frequency for methyl mercury monitoring.

WSPA appreciates the opportunity to comment on the draft language for the basin plan amendment. We look forward to continuing our partnership with the Regional Board to bring TMDLs to completion, adoption, and submission to the State Board. Thank you.

Alameda Countywide  
Clean Water Program

Contra Costa  
Clean Water Program

Fairfield-Suisun  
Urban Runoff  
Management Program

Marin County  
Stormwater Pollution  
Prevention Program

San Mateo Countywide  
Stormwater Pollution  
Prevention Program

Santa Clara Valley  
Urban Runoff Pollution  
Prevention Program

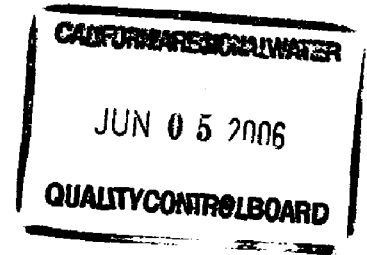
Vallejo  
Sanitation and Flood  
Control District



B A S M A A

June 5, 2006

Ms. Carrie Austin  
California Regional Water Quality Control Board  
San Francisco Bay Region  
1515 Clay Street, Suite 1400  
Oakland, CA 94612



**Re: Proposed Amendments to the Water Quality Control Plan for the San Francisco Bay Basin Related to Mercury in San Francisco Bay**

Dear Ms. Austin:

This letter is submitted on behalf of the Bay Area Stormwater Management Agencies Association (BASMAA) in response to the invitation to submit comments on the *Proposed Amendments to the Water Quality Control Plan for the San Francisco Bay Basin and Staff Report for Revised Total Maximum Daily Load (TMDL) and Proposed Water Quality Objectives to the Related to Mercury in San Francisco Bay*, dated April 21, 2006.

BASMAA is a consortium of eight municipal stormwater programs in the San Francisco Bay Area representing 90 agencies, including 79 cities and 7 counties. BASMAA is focused on regional challenges and opportunities to improving the quality of urban runoff that flows to our local creeks, the San Francisco Bay and Delta, and the Ocean. The member agencies of BASMAA are responsible for complying with the requirements of municipal separate storm sewer system (MS4) National Pollutant Discharge Elimination System (NPDES) permits issued by the San Francisco Bay Regional Water Quality Control Board (Regional Water Board) and, therefore, have been closely following and participating in the development of the TMDL for mercury.

BASMAA believes the development and implementation of a mercury TMDL for San Francisco Bay is an important, enormous and challenging effort. BASMAA agencies are committed to addressing impairments to beneficial uses of San Francisco Bay Area water bodies impacted by urban stormwater runoff. However, for the reasons articulated at more length in comments previously submitted to the Regional Water Board and the State Water Board (which are incorporated herein by this reference), BASMAA remains concerned about the Regional Water Board's potential approval of the SF Basin Plan Amendment. Furthermore, our concerns are elevated considering the proposed adoption of new water quality objectives (WQOs) for mercury in fish tissue, without the consideration of technical feasibility, potentially adverse environmental impacts, alternative WQOs and their relative potential impacts, and costs. These and other concerns are briefly described below.

Bay Area

Stormwater Management

Agencies Association

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## **1. Technical Feasibility and Costs of Attaining the Proposed Water Quality Objectives**

Section 13241 of the California Water Code requires the analysis of six factors prior to adopting a new water quality objective. Although very brief descriptions of the analyses associated with these factors are provided in Section IV of the Staff Report, the best available information was not used by Regional Water Board staff. In particular, the description of 1) the attainability of WQOs; and 2) economic impacts with regard to urban stormwater runoff are based on invalid assumptions and outdated data. As described below, the proposed Waste Load Allocation (WLA) supposedly designed to meet the proposed WQOs and which will inform future requirements for urban stormwater runoff is technically unsupported and would place a disproportionate, undue and unreasonable burden on urban runoff management programs.

### **Attainment of Proposed Water Quality Objectives**

As described in Section IV (1c) of the Staff Report, the proposed Basin Plan Amendment is intended to provide a program of coordinated control of stormwater and other factors, via its TMDL, allocations and implementation plan, which will in turn theoretically result in the attainment of the proposed WQOs. However, it is highly questionable whether there is even a linkage between the sediment-oriented WLAs/control measures and the proposed WQOs (particularly as are now proposed to be revised to speak to mercury levels in fish tissue). We also continue to question whether recycling programs, urban stormwater runoff source controls and/or treatment controls designed to meet the proposed WLA are technically feasible to implement on the scale that would seem to ultimately be required or are capable of meeting the very large load reduction targets (i.e., 48%).<sup>1</sup> Therefore, based on current information, the feasibility (or probability) of meeting the proposed fish tissue WQOs via a sediment-based TMDL has not been technically established. Even if this concern were to be ignored, it would be technically infeasible to address the sediment-oriented WLAs assigned to Bay Area urban runoff programs by implementing (or even substantially enhancing) urban stormwater runoff controls.

**Request** – BASMAA requests that, prior to Regional Water Board adoption of the proposed Basin Plan Amendment, the analysis conducted via California Water Code 13241 be revised to include the most current information available regarding the reasonable attainment by urban runoff dischargers of the proposed WLAs and associated WQOs.

### **Economic Considerations**

The cost estimates presented in the Staff Report appear to contradict the Regional Water Board staff cost estimates presented in their response to comments dated

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<sup>1</sup> For example, based on a preliminary evaluation of numerous urban stormwater runoff controls that was not available to staff at the time their staff report was prepared in conjunction with this proposed Basin Plan Amendment, substantially increasing the implementation of all control measures for mercury (i.e., well beyond existing levels and including new focused sediment removal projects) would likely only be able to reduce the estimated mercury loads from urban runoff by roughly 20% over 20 years. *Regional Stormwater Monitoring and Urban BMP Evaluation: A Stakeholder-Driven Partnership to Reduce Contaminant Loadings. Stakeholder Meeting Presentation, May 18, 2006. Presented by the San Francisco Estuary Institute (SFEI) and GeoSyntec Consultants.*

BASMAA comments on Proposed Amendments to the Water Quality Control Plan for the San Francisco Bay Basin Related to Mercury in San Francisco Bay

September 2, 2004.<sup>2</sup> Additionally, based on the most complete analysis of anticipated costs, which were previously presented by BASMAA in our TMDL comment letter (dated June 14, 2004), urban runoff cost estimates presented in the latest Staff Report continue to be drastically underestimated<sup>3</sup> and will place an undue and unreasonable burden on urban runoff management programs. Based on the above, it is clear that meaningful cost estimates for the proposed actions remain lacking.

**Request** - BASMAA believes that the Regional Water Board staff needs to reconcile its prior cost estimates, which vary from \$3 million/year to \$100 million/year. Because of this very wide range of potential costs, we again request that a thorough and reliable analysis regarding the economic costs associated with urban runoff programs' implementation of the WLAs and attainment of the proposed WQOs be prepared and considered by the Regional Water Board prior to its adoption of the proposed Basin Plan Amendment.

## 2. CEQA Analysis

Based on the CEQA analysis presented in the Staff Report, Regional Water Board staff assert that the current version of the Basin Plan Amendment is anticipated to have less potential environmental impact than the previous version. However, all potentially significant environmental impacts of the current and previous proposal have not been identified and analyzed as well as compared to alternatives as CEQA requires; these include temporary impacts that will be experienced as a result of implementation of the WLA. For example, the CEQA checklist does not consider the potential adverse environmental impacts from collection, storage, transportation and disposal of mercury as the result of pollution prevention activities to be implemented as the result of the TMDL. Likewise, it does not consider the adverse environmental impacts (both temporary and long term) of the potential construction or operation of stormwater controls or treatment facilities that may be required to meet the WQOs if pollution prevention measures are not sufficient to address the WLAs and/or WQOs by themselves. Adverse significant environmental impacts could also result from increased regulatory requirements for wetlands to avoid methylation of mercury. These activities will also affect local housing and transportation patterns, and changes in these will also undoubtedly have some related adverse environmental effects (e.g., increased air pollution and noise), as well as social and economic effects, that have not been analyzed as CEQA requires.

**Request** - BASMAA requests that the Regional Water Board require the staff to prepare a more thorough analysis of possible environmental (and related social and economic) impacts associated with the TMDL and urban runoff WLAs. The Regional Water Board

<sup>2</sup> Note that the cost estimate (\$100 million/yr) presented in the staff response to comments is significantly greater than the staff estimate of \$3 million/yr that appears in the current Staff Report, dated April 21, 2006 (page IV-2).

<sup>3</sup> The Staff Report relies on preliminary draft estimates obtained from SCVURPPP (i.e., EOA 2003b). However, these estimates were taken out of context, are misleading and should therefore be removed. For example, in cited correspondence with Regional Water Board staff, SCVURPPP staff indicated that "estimates provided should be considered very draft preliminary rough cost estimates from program staff and are not necessarily comprehensive". SCVURPPP staff also stated that "...the preliminary draft review of cost estimates presented here are based on the following assumption: The adopted Basin Plan Amendment (Basin Plan Amendment) language and associated permit conditions for urban runoff will look very similar to the revised preliminary draft Basin Plan Amendment language for urban runoff (revised Basin Plan Amendment language) submitted to Richard Looker (SFBWQCB) by BASMAA on September 17, 2003". However, this assumption is now invalid, given that the Basin Plan Amendment language and additional requirements that are now included in the Staff Report are different.

## BASMAA comments on Proposed Amendments to the Water Quality Control Plan for the San Francisco Bay Basin Related to Mercury in San Francisco Bay

should also require that the staff's CEQA analysis thoroughly evaluate the potential impacts of and alternatives to the proposed change to the Basin Plan Amendment's mercury WQOs (such as a 0.3 ppm fish tissue WQO reflecting U.S. EPA's water quality criterion for mercury).

### 3. Stormwater Methylmercury Monitoring

As requested by Regional Water Board staff in 1999, BASMAA member agencies conducted mercury, methylmercury and PCBs monitoring at 60 sites located in stormwater conveyance systems throughout the San Francisco Bay area. Methylmercury concentrations in samples collected from conveyances receiving urban stormwater runoff were roughly 0.4% of total mercury concentrations (a tiny fraction). Although methylmercury monitoring was planned for additional year, BASMAA member agencies were then told that it was not necessary to proceed with additional monitoring for methylmercury.<sup>4</sup>

Given that the monitoring data previously submitted by BASMAA member agencies suggest that *methylmercury in urban stormwater runoff makes up an extremely small proportion of the estimated concentration and load (and that most methylation is occurring in the Bay, not in urban runoff conveyances)*, potentially expensive monitoring requirements should not be imposed on urban runoff dischargers as is recommended in the proposed Basin Plan Amendment.

**Request** – BASMAA requests the requirement for methylmercury monitoring in urban stormwater discharges be removed from the proposed Basin Plan Amendment.<sup>5</sup>

### 4. Risk Management

BASMAA supports activities to investigate management actions aimed at the reduction of risk to public health through collaborative partnerships, such as the efforts currently underway by the Clean Estuary Partnership (CEP). However, it is well outside the purview of municipal urban runoff management agencies to address public health impacts or to develop, deliver or finance health care for discrete communities or individuals. In addition, although State Water Board Resolution No. 2005-0060 states that "mitigation of health impacts" should be part of a risk reduction program, in doing so the State Water Board directed "...the San Francisco Bay and Central Valley Water Boards to investigate ways, *consistent with their regulatory authority*, to address public health impacts..." (emphasis supplied). This directive does not go so far as to allow the Regional Water Board to mandate that municipal urban runoff management agencies develop, deliver or finance health care programs.<sup>6</sup>

**Request** – BASMAA requests that the new last bullet under Risk Management (Appendix A, Proposed Basin Plan Amendment, page A-24) be revised to read:

<sup>4</sup> "It isn't necessary to measure methylmercury in urban conveyances; methylation within the Bay is most likely more significant than actual direct fluxes of methylmercury. We didn't know for sure that a year ago, now we do, your data really helped make that point." Email from Regional Water Board staff to BASMAA representatives, dated April 10, 2001.

<sup>5</sup> For urban stormwater runoff, the intent of Resolved 5 of the Remand Order has already been met as the result of previous monitoring (as discussed above).

<sup>6</sup> In any event, such a mandate would clearly not be a function of the federal Clean Water Act and would be subject to the restrictions of the Unfunded Mandates Initiative previously adopted by the State's voters.

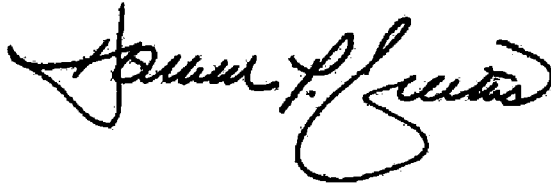


**BASMAA comments on Proposed Amendments to the Water Quality Control Plan for the San Francisco Bay Basin Related to Mercury in San Francisco Bay**

- "The Water Board, California Office of Environmental Health Hazard Assessment, and California Department of Health Services, investigate ways, *consistent with their regulatory authority*, to address public health impacts of mercury in San Francisco Bay/Delta fish, including by undertaking activities that reduce actual and potential exposure of and mitigate health impacts to those people and communities most likely to be affected by mercury in San Francisco Bay caught fish, such as subsistence fishers and their families."

We hope you find these comments and suggested improvements to the Mercury TMDL Staff Report and proposed Basin Plan Amendment useful. BASMAA representatives look forward to working together with you and other Regional Water Board staff to address our concerns and incorporate the suggested changes into a revised Staff Report and Basin Plan Amendment. Please contact me at (925) 313-2373 if you have any questions regarding the comments or suggested changes.

Sincerely,



Donald P. Freitas  
BASMAA Executive Board Chair

cc: Bruce Wolfe, SFBRWQCB  
Tom Mumley, SFBRWQCB  
Richard Looker, SFBRWQCB  
BASMAA Executive Board  
Geoff Brosseau, BASMAA

**From:** <CCWALDECK@aol.com>  
**To:** <bwolfe@waterboards.ca.gov>  
**Date:** Thu, Jun 1, 2006 1:01 PM  
**Subject:** Mercury Thoughts and Observations

Hi Bruce:

A few quick observations before our June 14, 2006 Regional Board Meeting with a little help from my Mill Valley enviro friends who saw that I won an EPA Award. I really want to get it right this time. No need to hard copy me back... please give me a call to discuss. Thanks  
Cliff

1. Hundreds of thousands of women of child-bearing age in this country have levels of mercury in their bodies that exceed the dose considered unsafe by US EPA. Women in the Bay Area have particularly high levels because we have both high-end consumers of large prey fish and because we have significant numbers of subsistence fishing families who eat contaminated fish from the Bay. I am very concerned about the health of our residents – I believe we should be doing everything in our authority to help protect them by creating an aggressive policy to clean up mercury.

1. Stormwater “deemed in compliance” language: Didn’t we remove this exact language from the pesticides TMDL? I think we should remove it here too. It doesn’t make sense – the sentence doesn’t seem quite true – and staff said that it really had no purpose. RECOMMEND: I would like staff to consider removing this sentence to be consistent with what I think was the policy decision we already made in the pesticide TMDL.

1. Refineries: According to staff’s best estimate, there is almost as much mercury coming into the Bay Area in crude oil as there is coming in from the mining legacy in the Central Valley. Close to 400 kg of mercury in crude oil. Why are we letting the refineries off the hook, here? Why aren’t they telling us how much mercury they bring into the Bay Area and where it is going? Aren’t TMDLs set by determining how much mercury comes into the system and where it is coming from? A VERY REASONABLE REQUEST: I would like to ask staff to add one question to the list here requiring the refineries to tell us how much mercury is contained in the crude oil they bring into the Bay Area every year and where it is going. In the words of Tom Petty “I need to know!!”

1. Individual allocations: Does it make sense for us to say we will not enforce against individual wastewater dischargers that violate their permit limits? Aren’t TMDLs our final chance to address this problem when permits have not been stringent enough? Would these group limits set a broader policy precedent that individual permits won’t be enforceable? Isn’t that a significant break from what we’ve always done? Doesn’t the Clean Water Act require permit limits to be enforceable? Otherwise, what is the point? I read the State Board Remand to require individual permit limits, and if they’re not enforceable, that’s just bad policy and I’m concerned we’d see this thing remanded once again. Honestly, group limits seems like legalized “weasel factorization” of permits. RECOMMENDATION: I would like staff to consider making individual permit limits enforceable regardless of whether the group load is violated.